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ABSTRACT

Every year, the University of the State of New York and the State Education Department present to the members of Congress and the Federal Administration their analysis of key education issues and proposals for related legislation. This 1992 edition focuses on four main issues: (1) promoting technology as an integral part of teaching and learning; (2) reauthorizing the Higher Education and Rehabilitation Acts; (3) implementing national education reform based on the goals embodied in the America 2000 program, the New York State Compact for Learning, and the reform efforts of other states; and (4) building a strong national education research program. Recommendations are provided for the reauthorization of both the Higher Education Act and the Rehabilitation Act. Youth apprenticeship programs are suggested as a necessary means to keep up with changing industrial and business needs. A brief review of problems concerning working students and labor laws suggests the need for a single, comprehensive set of laws and regulations that would allow educators to make decisions regarding work and students. Several recommendations are given to continue current federal tax incentives promoting education, job development and cultural awareness. Critical areas in education research and development, and cultural service institutions are targeted. An appendix includes a chronological list of significant dates of federal involvement in education. (LAP)

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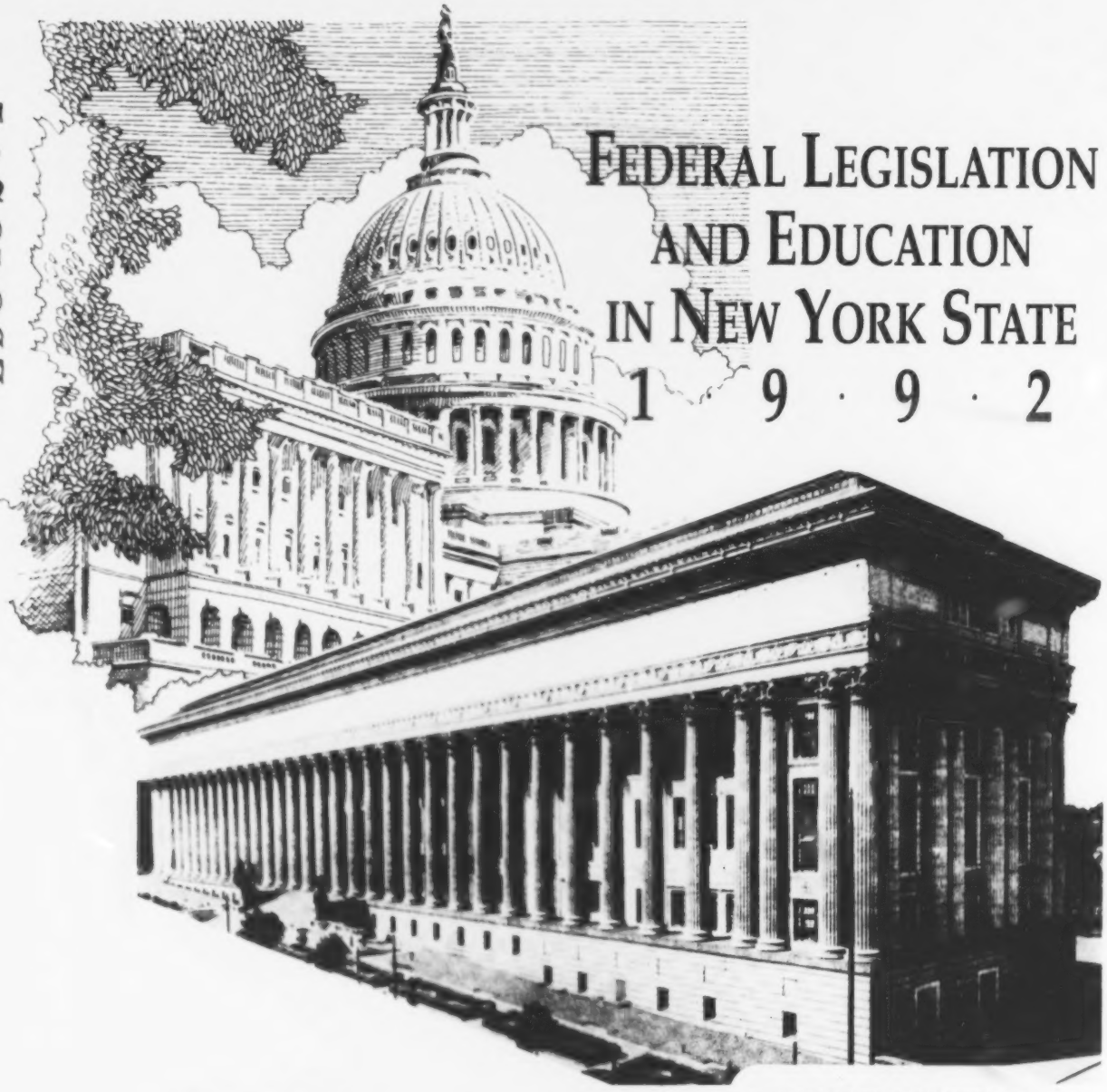

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FOREWORD

The President and the Congress, along with many states and localities, have taken significant steps to improve our nation's system of education. We must continue these efforts to fulfill the promise of the Education Summit of 1990. The intolerable, unequal division of education remains, with one system for disadvantaged, largely minority students and one for everyone else. Yet, every day the changing world requires knowledge and skills that we are not helping all our students acquire.

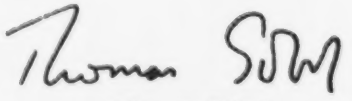
The Federal government must lead us out of this cruel dilemma by fully supporting national programs that promote educational opportunities and desirable educational outcomes for every student. Achieving these goals will require a close partnership among Federal, state, and local education agencies.

In the spirit of that partnership, we annually present to the members of Congress and the Federal Administration our analysis of key education issues and proposals for related legislation.

This 1992 edition of *Federal Legislation and Education in New York State* focuses on several issues related to assuring an equitable, high-quality education for everyone:

- Setting a national capitalization agenda to promote technology in its many forms as an integral part of teaching and learning, not simply as a supplement to primary operations.
- Reauthorizing the Higher Education and Rehabilitation Acts.
- Implementing national education reform based on the goals embodied in the America 2000 program, our own New York State Compact for Learning, and the reform efforts of other states.
- Building a strong national education research program, especially to address educational improvement.

I join the members of the Board of Regents in urging our New York Congressional delegation, other members of Congress, and the Administration to consider and act upon our recommendations.



Thomas Sobol

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EXECUTIVE SUMMARY

I. THE FEDERAL GOVERNMENT'S ROLE IN EDUCATION (pages 1-6)

As state education reforms continue, the scope of Federal support for education is clear. The Regents again assert that the Federal government has an historically defined role to play that should be maintained and coordinated with state and local activities and should address the following priorities:

- Promoting student and school success, beginning with school-based child care, through targeted assistance with administrative flexibility; sufficient aid to assure access and equity; and a sound infrastructure. We also note the special concerns and needs of education institutions in our rural areas;
- Developing and maintaining a skilled work force;
- Helping to attract and retain qualified teachers and counselors;
- Strengthening the nation's research, development, and information capacity;
- Enlisting older Americans in educational and cultural programs and improving delivery of services to them;
- Enabling people with disabilities to have equal access to quality programs;
- Addressing challenges of ethnic and cultural diversity; and
- Ensuring the free flow of information through revision of the Paperwork Reduction Act to serve as a focus for Federal information resources management.

II. EDUCATION TECHNOLOGY CAPITALIZATION (pages 7-12)

Calls for education reforms intensify as dropout rates increase and our needs for a fully prepared work force go unmet. A less publicized proposition cites the undercapitalization of education compared with other enterprises as key to our schools' crisis. By capitalization, we mean the use of technology in its many forms as an integral part of delivering a service, here education, not simply to supplement operations. Capitalization means investing in hardware, software, and their interconnections to assist teaching and student learning and aid in administrative work.

In this paper, we briefly describe the problems inherent in the current system and propose that the Federal government take the lead in making education more capital intensive. It can do this by setting a national capitalization agenda through programs of research and development on capitalization issues and support of state and local acquisition of necessary equipment and software. Federal activities can and should spur lower level action. Additionally, while we emphasize the need to incorporate technology into elementary and secondary schools in the following discussion, many colleges and universities, particularly those with larger populations of disadvantaged students, lag behind in this area.

A key Federal achievement would be an Education Reconstruction through Technology Act of 1992, to provide bonding authority or low-interest loans for local education agencies, libraries, and higher education institutions, particularly those in distressed communities, to purchase equipment and establish their own computer infrastructures. This would allow them to increase staff and student use of computers in the learning process and provide links to local and national networks for information interchange.

III. REAUTHORIZATION OF THE HIGHER EDUCATION ACT (pages 13-20)

For more than 25 years, the Higher Education Act (HEA) has played a key role in American higher education. The Act's student assistance programs have enabled millions of students to obtain postsecondary education and training that they would not have otherwise been able to afford and, in doing so, have supplied the nation with a skilled work force. The Act's other programs have provid-

ed direct institutional support for colleges and universities to perform diverse instructional, research, and service functions.

The 1992 amendments to the Act (S. 1150 and H.R. 3553) must reaffirm the Federal commitment to American higher education. To do so, the amendments must accomplish four major goals that are fully consistent with the Act's historical purposes. This section provides our recommendations for reauthorization to meet the goals:

- Provide student assistance programs to assure Americans that education beyond the high school level will not be reserved for the wealthy.
- Help maintain an adequate supply of qualified labor in areas of national need. Teachers are a top priority.
- Help preserve and enhance facilities, libraries, and information networks in American higher education.
- Encourage innovation that will bring a vital system of American higher education into the next century.

IV. TRANSITION TO WORK: FULL ACCESS TO SERVICES FOR PEOPLE WITH DISABILITIES (pages 21-26)

Federal programs authorized by the Rehabilitation, Individuals with Disabilities Education, and Vocational Education Acts have a common thread relating to people with disabilities: the potential for integration of service delivery in employment training. This section describes New York State's continuing efforts to provide full access to educational and vocational services and resources that have an impact on people with disabilities. We use the problems facing New York to frame recommendations for reauthorization of the Rehabilitation Act in four main areas:

- **Integrated Employment.** Many people with disabilities could benefit from employment in integrated community work settings if the long-term support services necessary to sustain them in an integrated setting were available. We need to expand those programs so that persons are employed closer to their full potential than at present.
- **Interagency Coordination.** The coordination of services among agencies is critical to improving access to vocational training and employment opportunities for individuals with disabilities. The plethora of requirements of Federal and state laws that affect such people must be closely coordinated to eliminate duplication and inconsistency. The goal of agency coordination is to integrate Federal, state, and private services and promote the full and independent participation of all people with disabilities in our society.
- **Improving Access to Services.** All individuals should have opportunities to learn about and gain access to vocational rehabilitation services; but some systems, policies, and procedures of the vocational rehabilitation process have effectively limited access. Examples include Federal requirements for evaluation of rehabilitation potential. We must alleviate or remove these barriers.
- **Federal Funding Improvements.** The current Federal funding formula, based on squaring per capita income and population trends, does not account for the level of need of persons with disabilities. It penalizes states such as New York that have high average income or have small population growth, but may have more prospective consumers. As rehabilitation service needs change and expand, the formula must be revised to equitably meet demand, including full support for innovations such as supported employment and rehabilitation engineering.

V. TRANSITION TO WORK: APPRENTICESHIP (pages 27-30)

We have reached a point in history when social and economic trends are converging to create a national crisis in the transition of many young people to the workplace. Our youngsters participate in a national education system that emphasizes college preparation at the expense of education and training for a vocation. This occurs despite evidence that both academic and vocational preparation is needed. These factors combine with changing industrial and business needs to leave us with a shortage of adequately qualified workers.

To alleviate this situation, we must begin to rethink the structure of our learning process. The recently enacted Oregon Educational Act for the 21st Century and changes discussed in New York State are examples of the type of effort required to effect lasting change. They would equally emphasize a college preparatory course of instruction or a combination of work and study targeted to direct entry to the workplace, with student flexibility to switch between the paths according to personal circumstances.

However, with our traditional concentration on education to prepare students for college, we have paid less attention to those in the nonacademic path. That sector needs strengthening if efforts like Oregon's are to succeed.

Near the end of the first session of the 102nd Congress, Senator Sam Nunn (D-GA) and Representative Dave McCurdy (D-OK) reintroduced bills in their respective houses to create youth apprentice demonstration programs. We believe this legislation would be a good start toward solving our problems along with Senator Donald W. Riegle Jr. (D-MI) and Representative James L. Oberstar (D-MN) Apprenticeship Improvement Act, which would strengthen the Federal Bureau of Apprenticeship and Training.

VI. EDUCATION FOR A NEW CENTURY, A NEW ERA
(pages 31-33)

Both the President and Congress have taken steps to put education at the top of the national domestic policy agenda. Three examples of their efforts include:

- the **President's America 2000 strategy**, based on a set of goals similar to those driving state reforms like New York State's New Compact for Learning;
- the **President's legislative proposals** to implement the America 2000 strategy (in a manner quite unlike New York's efforts to implement education reform); and
- **Senate and House proposals for a Neighborhood Schools Improvement Act** to establish a nationwide education planning process and block grant for school improvement activities, to provide much needed Federal support.

In this section, we respond to these above initiatives and lay out the reasons why we believe the Senate proposal best advances the commonly held goals of the America 2000 agenda and New York State's New Compact for Learning. We urge that the conference version of the two bills include sufficient flexibility to accommodate school reforms in progress in many states and localities. It would be counterproductive if, to qualify for funding under this new initiative, state boards would have to backtrack, reengaging community groups across a state to repeat planning and implementation activities that may have been continuing for a considerable time.

VII. WORKING STUDENTS AND LABOR LAWS
(pages 34-36)

Acquainting students with the world of work and preparing them to make the transition from school to the workplace is a critical task for secondary schools, particularly in helping students who are at risk or disabled. We must ensure the quality of the work experiences provided to youth who need them. Even before that, however, we must seek fundamental changes in laws and regulations that preclude flexible programming. We now are limited by:

- Regulations governing work experience and career exploration programs for 14- and 15-year-olds. These inhibit or preclude alternative activities with potential benefit for disabled or dysfunctional students. Certain aspects of the United States Department of Labor Work Experience and Career Exploration Program (WECEP) and provisions for workers with disabilities are particular concerns; and
- Lack of regulations on the number of hours and the times that 16- and 17-year-old students can work while school is in session. As a result, many young people are more involved with work than with school, and those who work many or late hours have academic difficulties.

In this section, we will briefly review these problems and make recommendations to help solve them. The ultimate goal in examining the circumstances of student workers should be development of a single, comprehensive set of laws and regulations that address the issues affecting their employment. In doing so, we must maximize flexible educational programming by permitting local educators to make decisions regarding work and students, including waivers for students to work for little or no pay if part of a bonafide educational activity.

VIII. FEDERAL TAX INCENTIVES TO PROMOTE EDUCATION, JOB DEVELOPMENT, AND CULTURAL AWARENESS
(pages 37-41)

The current tax code contains several tax expenditures that benefit educational and cultural activities. The Regents support continuation of many current expenditures but believe additional incentives are needed to encourage more investment in those areas. In this section we recommend:

- Permanent extension of Section 127, which facilitates employee educational assistance for undergraduate and graduate study, and expansion to support blue-collar worker participation in high school equivalency and continuing education programs;
- Permanent extension of the research and experimentation tax credit, with an expanded definition of "qualified research" to include study in education, training, and related fields;
- Enactment of a Targeted Education and Training Equipment Tax Credit to provide more incentive for business and industry to invest in education and training technology;
- Permanent extension and refocusing of the Targeted Jobs Tax Credit to reach groups underrepresented in its coverage, especially people with disabilities;
- Monitoring by Congress of implementation of the new Education Savings Bond program to gauge its impact on taxpayers saving for postsecondary education. Due consideration must be given to the President's Family Savings Accounts and other proposals that have the same goal;
- Restoration of student deductions for student loan interest and income exclusions for the full value of scholarships and fellowships;
- Maintenance of the current Unrelated Business Income Tax exemption for nonprofit and charitable organizations; and
- Restoration of charitable contribution deductions for nonitemizers and donors of any gifts of appreciated property.

IX. EDUCATION RESEARCH AND DEVELOPMENT
(pages 42-46)

The Federal government has played a minimal role in education research and development (R & D). One reason is that the Congress and Administration have not cooperated in setting priorities. The conflict is rooted in the model for education R & D within the Department of Education: Congress authorizes and funds the research structure (Office for Education Research and Improvement), but only indirectly suggests research objectives. The Administration's research objectives are often counter to those of the Congress. Funding levels reflect this dilemma.

The Regents have been steadfast in proposing an alternative research structure that might alleviate distrust while addressing the urgent need for education R & D to guide reforms occurring nationwide. We target four critical areas that can be justified as Federal responsibilities because of their scope and need for central direction: 1.a **research program** to address specific issues of national concern and to include a national education cooperative extension; 2. a coordinated, comprehensive **national knowledge base**; 3. a system of educational **assessment and evaluation**; and, 4.a firm pattern of **technology transfer** between Federal agencies and the civilian education community.

In this section, we briefly review these topics. Also, Representative Major R. Owens (D-NY) has introduced the Educational Research, Development, and Dissemination Excellence Act (H.R. 4014), a bill to overhaul the Federal education R & D function that is many ways similar to the Regents proposals. After the Regents proposals have been reviewed, we summarize the Owens legislation.

X. INFORMATIONAL AND CULTURAL SERVICES: Archives, Public Broadcasting, Museums, and Libraries
(pages 47-54)

A major strategy for building societal cohesion and civic responsibility has been public funding for effective cultural institutions. In New York State these include museums, which express and interpret the history and culture of society; libraries and archives, which provide access to society's accumulated knowledge and to the workings of government; and public radio and television, which assure educational, public affairs, and cultural programming in the public interest.

In this section, we discuss these important institutions and make recommendations on several Federal issues, including:

- Development of a stronger program to identify, preserve, and make available archival records in electronic formats and continuing, formal coordination between Federal and state government archives and records programs;
- Support for telecommunications equipment purchases for public broadcasting to ensure a flow of high-quality programming, especially targeted to early childhood development and parent education and to help low-performing schools acquire classroom video equipment;
- Increasing demand and rising costs associated with the availability of museum services and concomitant increases in funding for the Institute of Museum Services; and
- Consideration of major problems in meeting the costs and logistics of new technologies and networking and the needs for facility construction and renovation and materials preservation.

Other recommendations address the use of the nationwide network of libraries and the Federal government document depository system to disseminate information on critical national problems; theft and sale of antiquities and art; funding for public library construction to meet needs for modern library services and requirements of the Federal Disabilities Act; authorization of an Assistant Secretary of Education for Library and Information Services; affordable telecommunications rates; support for school library and media centers; support for the National Endowments for the Humanities and the Arts and the National Science Foundation; aid for video and television technology in education; and extension of the Treasury-Postal Service appropriations subsidy.

I. THE FEDERAL GOVERNMENT'S ROLE IN EDUCATION

The New York State Board of Regents continues to believe that the Federal government has an historically defined role to play in education that should be maintained and coordinated with state and local activities. This Federal brochure outlines the Regents positions and proposals that we believe should help guide that role in the second session of the 102nd Congress. In this introduction, we summarize the Federal role and important policy areas of Federal concern. Based on the anticipated agenda for the coming session, we expand on some of these issues in subsequent sections.

Public Policy Objectives

The Federal government traditionally has served special educational needs through categorical aid and incentives for state and local funding of programs (see Appendix for a chronology of major actions). The Regents consistently have stated that education is a Federal concern, a state responsibility, a local operational function, and a parental duty. However, what is the proper definition of "Federal concern?" From a policy perspective, what is the overriding justification for a Federal education role?

From colonial times to the late 1950s, the main Federal concern was to ensure an increasingly larger educated population, especially in fields having national impact such as the military, agriculture, and vocational education. This concern, however, was not inclusive, as Native Americans and Americans of African descent have been selectively excluded from full participation. The historical relationship between excluded populations and their disproportionate representation in current categories of disadvantage must be addressed at all government levels.

When viewed retrospectively, attempts to redress this inequity have often been late or misplaced. For example, the First Morrill Act in 1862 provided for establishment of land-grant colleges in states and territories. The 1890 Second Morrill Act sought to provide for a fuller endowment of such colleges. It also states that "the establishment and maintenance of such colleges separately for white and colored students shall be held to be in compliance with the provisions of this act if the funds received in such State or Territory be equitably divided." Thus, in seeking to address the equitable Federal funding of "colored" colleges, the legacy for separate and equitably funded, but not necessarily equal, institutions was committed to law, *a law that remains on the books today*. So, despite the avowed Federal commitment to equity and access, vestiges of institutional racism remain and represent existing real discrimination that must be expunged.

A broader social consciousness in the 1960s led the Federal government to help state and local efforts to provide educational opportunities. While discrimination, especially through racism and sexism, has certainly not been eliminated, there was a Federal effort to subscribe to the complementary themes of "equity" and "access" in justifying supplementary assistance. This effort is being threatened by actions such as that taken by the administration to circumscribe the ability of higher education institutions to award scholarships to minority students. We believe that the growing trend to reverse civil rights and affirmative action laws and regulations must cease so we can ensure that all citizens have a quality education.

Educational "equity" is achieved when people's educational outcomes are not limited by conditions such as physical or mental disabilities, gender, race, or economics. In promoting equity, the Federal government has established categorical programs to help meet special needs of people who are economically and educationally disadvantaged, disabled, and non-English speakers. Federal funds are supplemental and may not supplant state and local monies.

"Equity" relates to the concept of "access" because the intent of much Federal aid is to improve "access" for people whose special needs have diminished their "equitable"

educational opportunities. Examples include the Elementary and Secondary Education, Higher Education, Individuals with Disabilities Education, and Adult Education Acts.

Free public higher education is not generally a state constitutional right. Providing "access" in this context means ensuring that a student has an opportunity to pursue higher education. The Federal government seeks to lessen the economic inequities that exist for low- and middle-income students who desire to attend colleges but cannot afford the high tuition and attendance costs. Pell Grants, Supplemental Opportunity Grants, College Work-Study, and low-interest student loans have been designed to meet this objective.

The Federal government's involvement in education also has been justified as a response to burdens placed on education agencies and institutions because of direct Federal policy or action. For example, the installation of a Federal military base or a public housing project can reduce a school district's tax base while increasing the number of children to be served. The Impact Aid program has helped school districts address this problem. The influx of Indochinese, Cuban, Haitian, and Central and South American refugees in some states is another example of a Federal policy that has required temporary Federal assistance.

The Federal government also has played a role in education research and data collection. It generates, collects, and disseminates information and provides incentives for other organizations and agencies to undertake similar tasks. To carry out these functions, Congress created the National Center for Education Statistics and the National Institute of Education and its successor, the Office of Educational Research and Improvement. The rationale for such activities is that the Federal agency can more effectively marshal resources for efforts of national scope.

Despite the virtues of these policy objectives, many administrators contend that Federal education programs contain requirements and regulations that legally exceed the proper Federal role and intrude upon state and local authority. Moreover, the federally imposed administrative burdens and legal mandates are not balanced by commensurate Federal aid to help localities meet them. While criticism could be warranted, the Congress may not have intended to overburden, but simply was overzealous in seeking equity and access and trying to balance policy objectives with constitutional and other legal constraints.

The Regents and the Federal Role

Given the evolving history of Federal involvement in education, the Regents believe the Federal government continues to be an important partner in the nation's efforts to assure educational access, equity, and quality for all students. The Regents believe the Federal role is embodied in the following priority policy areas.

Providing Opportunity for Students and Schools to Succeed. The Regents are committed to an educational system in which all children have an equal opportunity to succeed. Under the nation's present economic and social conditions, however, far too many children are denied this opportunity. In both urban and rural areas nationwide, distressed communities and families are faced with failing schools, unemployment, poverty, malnutrition, and dependence on public assistance. One of the primary outcomes of these multiple social problems is low educational achievement by our children, which then contributes to an intergenerational cycle of the above mentioned social ills.

As a fundamental thrust in combatting such problems, we must implement a policy of ensuring that parents' literacy levels always equal or exceed that of their children through secondary school. This is an integral step if we are to break the intergenerational cycle of failure and poverty.

Assistance from all governments must extend beyond K-12 to include new ways of teaching, learning, and restructuring failing schools; the opening of a route to postsecondary education for all who wish to take advantage; and, the development and maintenance of cultural institutions. These topics are discussed in the sections on "Education Technology Capitalization," "Reauthorization of the Higher Education Act," "Education for a New Century, A New Era," and "Informational and Cultural Services: Archives, Libraries, Museums, and Public Broadcasting."

We applaud enactment of national service and child care legislation by the 101st Congress. Alternatively, the elimination of school-based child care programs from final action is a measure that should be reversed. We must closely tie the education system to child care to ensure a continuum of attention for youth needing larger-scale and longer-term support.

Additionally, as educational reform proceeds in many locations, the special plight of rural schools must receive more attention. Representatives Carl C. Perkins (D-KY) and William H. Gray III (D-PA) have introduced H.R. 2819 to provide financial assistance to eligible local education agencies to improve rural education. Among other provisions, the bill would help restructure and improve the performance of schools in such areas. It also would create an Assistant Secretary of Education position in the U.S. Department of Education and authorize the Secretary of Education to establish "National Rural Education Research Centers" to provide regional technical assistance, research and development, and evaluation services.

As Representatives Perkins and Gray imply in the introduction to H.R. 2819, action is overdue. Rural schools lack the critical mass of resources needed to provide the range of programs found in urban and suburban schools. About

60 percent of our public schools are rural with populations of fewer than 2,000 students. While increasingly fewer of their students are pursuing postsecondary education and their preschoolers have less access to critical early childhood learning programs, Federal and state funding has been inadequate to meet their needs.

As an example of the scope of the problems facing rural education, consider the number of teacher preparations for individual classes. In a larger district with more teachers and more specialization, one person may teach several sessions of World History during a semester, requiring one preparation for all daily classes. Alternatively, the rural teacher may instruct daily in World History, European History, and various aspects of American History, each requiring a separate preparation. Yet the rural teacher likely is paid less than an urban/suburban counterpart.

New York is starting to more fully address the problems of rural education. We believe that the interest shown by the Congress is laudable and must be vigorously pursued.

Targeted Assistance with Flexibility. The push for more flexibility in state and local implementation of Federal programs was reinforced by the education summit between President Bush and the nation's governors and the America 2000 strategy. The Regents concur with this sentiment. We believe that the pending Neighborhood Schools Improvement Act legislation, which seeks to create a collaborative planning and improvement process, would provide a further step toward this flexibility. We discuss the Act more fully in the section on "Education for a New Century, A New Era."

Addressing the Educational Infrastructure. Over 61 percent of today's schools were built during the 1950s and 1960s, and over 20 percent were built more than 50 years ago. One out of four of the nation's school buildings is in poor condition, with 43 percent obsolete and 13 percent structurally unsound. According to a 1989 report by the Education Writers Association, $84 billion is needed to build and modernize schools nationwide, and $41 billion is required solely for maintenance and repairs.

A 1991 survey by the American Association of School Administrators further substantiated the problem. It found that 5 million students attend class in substandard buildings. Nearly one-third of our schools were built before World War II, only eleven percent since 1980. The schools' problems ranged from the need for replacement of roofs and poor or outdated heating systems to the presence of environmental hazards like radon and asbestos.

In our urban areas, the problem is even more acute. For example, the average age of school buildings in New York City is over 50 years, with 850 schools needing repair or renovation. Of these, more than 300 require complete modernization and nearly 500 need new heating or electrical systems. Moreover, 40 percent of the City's schools are currently defined as severely overcrowded, and a 20 percent enrollment increase is projected by 1998.

The Federal government must help maintain the infrastructure of our nation's schools, universities, and libraries, just as it supports critical capital improvements in the nation's highways, bridges, and dams. The condition of school facilities is unquestionably tied to the educational success of students. We believe that an aid program for renewing our educational infrastructure must be established by the Congress.

The Senate would modestly improve the situation through its reauthorization proposal for Title VII of the Higher Education Act, to enhance construction, reconstruction, and renovation of academic and library facilities. We support this effort.

Assuring Access and Equity through Financial Assistance. The Federal government currently provides supplementary aid to expand opportunities for students and schools to succeed. However, Congress and the current administration have just begun to reverse the reduction in education funding that occurred over the last ten years. More must be done to restore education to the priority funding status it once enjoyed.

One proposal aimed at expanding Federal education spending was outlined in 1988 by the Secretary of the Washington State Department of Social and Health Services. A Children's Trust would be funded through employer and employee payroll contributions, analogous to the Social Security trust fund. With tax contributions at three-tenths (0.3) percent, revenues by the fifth year would approximate $20 billion. The money would be used in conjunction with current education appropriations, providing a 70 percent funding increase for children's programs.

Developing and Maintaining a Skilled Work Force. Education supplies the human resource needs of the economy, giving people the opportunity to achieve economic self-sufficiency and personal fulfillment. For this reason, access to the education system must be increased for all, including individuals with disabilities.

The transition from education to employment is a critical one. It requires special consideration by secondary schools and postsecondary institutions, particularly in serving at-risk populations and preparing students for an internationally competitive job market. This theme is addressed in several sections, most notably those on "Transition to Work: Full Access to Services for People with Disabilities," "Transition to Work: Apprenticeships," and "Working Students and Labor Laws."

Enhancing the Profession of Teaching. Perhaps the most important factor in the success of our educational system is the quality of the nation's teaching force. Although teacher recruitment, retention, retraining, and remuneration have traditionally been state and local

responsibilities, the Federal government can play a meaningful role in boosting teaching as a profession and enhancing state and local efforts to attract qualified candidates into the field.

For many years the Federal government has authorized modest incentive programs to encourage college-age students to join the teaching profession. Support for those programs has waned in recent years, however, and funding has never been adequate to support their goals.

The need for a renewed Federal effort in this area is critical. The shortage of qualified teachers has reached severe proportions for certain fields in many areas of the country, including science, mathematics, bilingual, and special education, and in securing sufficient numbers of minority teachers, particularly in urban areas.

Given the national importance of meeting these needs, the Federal government has a clear stake in addressing the problem. The Regents strongly support any efforts to assist the teaching profession. This topic is discussed in the section on the Higher Education Act reauthorization.

Strengthening the Nation's Research and Information Capacity. We must develop our capacity for research and development as a basis for education reforms and their evaluation and to ensure access to necessary information about education. While state and local governments, libraries, other public institutions, and the private sector may contribute piecemeal to our information base, we need Federal coordination and guidance to ensure a coherent, centralized policy to meet research and information needs. The sections on "Education Technology Capitalization" and "Education Research and Development" examine our education research, development, and information needs.

Enlisting the Energies of Older Americans. The overall aging of our population calls for marshaling resources on behalf of the elderly and providing ways for them to play vital roles in strengthening our education institutions and programs. The Federal government must develop policies and programs to improve the delivery of education and cultural services to the aging, and to enlist their experiences and expertise to enhance these areas.

Although many Federal programs help support a basic health and living standard for older Americans, there is no policy to coordinate a comprehensive delivery system that meets their wider needs. We believe the Federal government must do more and urge:

- a comprehensive national education policy on the aging to promote and coordinate services to them;
- a National Center for Educational and Cultural Opportunities for the Aging to advocate for the interests of older people in Federal policies and programs, serve as a clearinghouse for information on aging issues, promote and strengthen intergenerational programs, and provide a critical mass of support for research and development;
- a national agenda to use older people as a significant stock of human capital, to serve as volunteers and paid workers in civic, cultural, educational, and recreational programs;
- a national education and teacher training program on the biology, psychology, and sociology of aging; and,
- training programs for providers of services to the elderly, to help them train the elderly to serve their peers and other persons in need and to ensure that the providers keep abreast of recent research on aging. Educational institutions must expand their course offerings in gerontology and geriatrics to ensure sufficient professionals and paraprofessionals trained in the care of aging persons.

Enabling People with Disabilities. The Regents believe that a fundamental education priority at all levels of government is to ensure that people with disabilities have equitable access to quality programs and career opportunities. This philosophy was first manifested in the 1918 Smith-Sears Act, which marked the start of vocational rehabilitation aid. It was followed many years later by the landmark 1975 Education for All Handicapped Children Act, which assured all children the right to a free, appropriate, public education. Since that time, the Federal government has expanded its policy towards people with disabilities, culminating with the 1990 Americans with Disabilities Act.

The Federal government must do all it can to help people with disabilities become contributing members of the work force and have optimal career opportunities. It must provide the supplemental resources needed to allow state and local governments to comply with Federal mandates. Our views on this topic are contained in the section on the reauthorization of the Rehabilitation Act.

Responding to Ethnic and Cultural Diversity. The United States must build on its linguistic and cultural diversity to prepare for the 21st century. The education community must support this goal by improving its understanding of and respect for the ethnic and cultural diversity of the people it serves to ensure everyone the opportunity to succeed.

Through its policies and programs, the Federal government can help to assure that the nation's rich diversity is never a cause for exclusion or discrimination. Through foreign languages, international education, and international exchange programs, we also can improve our economic competitiveness with other nations.

The Federal role in international education historically has been narrow and inadequately funded through the

International Education Program under Title VI of the Higher Education Act (HEA); the Fulbright-Hays Program; and selected National Endowment for the Humanities programs. Most Federal assistance has been used for advanced study and research.

More recently, the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 authorized a Foreign Language Assistance program at $20 million. An appropriation of $10.0 million has been made for Federal fiscal year 1992. The Regents are encouraged by this appropriation, but believe it should be funded at its authorized level.

In addition, the Regents call for an increase in funding for the existing international programs noted above. Also, the following bills were not passed in the 101st Congress. The Regents urge their reconsideration:

- The Global Elementary Education Act of 1990, to aid elementary foreign language and culture instruction, through foreign language institutes, preservice training of elementary teachers, teacher exchanges, and development of foreign language and culture instructional materials.
- The Educational Exchanges Enhancement Act of 1990, to provide a program of scholarships for American college students to study abroad and for international students to come here, especially targeted to economically disadvantaged students. Eligibility should be extended to secondary school students, who are normally shut out of such opportunities but whose participation can dramatically clarify their perspective on education and future career goals.

Ensuring the Free Flow of Information. Far from being just a "paperwork reduction" measure, the Federal Paperwork Reduction Act of 1980 forms the core of a Federal information policy. The Act covers the acquisition, administration, and dissemination of information by Federal agencies. Its requirements, or regulations issued or drafted (especially revisions of the Office of Management and Budget's Circular A-130) to interpret and implement them, have become increasingly controversial in recent years. Criticisms have suggested that the government has:

- unduly reduced the collection of information needed for effective government operations or for use by other organizations and people;
- overdelegated government information responsibilities to the private sector without ensuring adequate public access; and,
- emphasized short-range considerations at the expense of the future needs of governments and citizens.

We strongly believe that the Paperwork Reduction/Information Resources Management bills considered in the 101st Congress do not address vital issues relating to Federal records and the impact of Federal information practices on state and local governments, including their archival records. We support the following changes recommended by the National Association of Government Archives and Records Administrators and endorsed by the Information Policy Consortium of the Council of State Governments, National Governors Association, and National Council of State Legislatures:

- Records retention and disposition analysis and review must occur during the design or redesign of electronic information systems. Adequate systems documentation must be retained as long as the information in the system has value;
- Adequate notice, information, and opportunity for comment must be given when Federal information systems design or related decisions have a major impact on state and local governments;
- An ongoing Federal-state committee must be created to exchange views and experience on information policies;
- An ongoing information locator system must be created. It must include information about archival records as well as major current Federal information systems; and,
- Information stewardship and documentation responsibilities must be established for Federal managers.

Beyond these direct effects, government archivists and records managers and other information managers are concerned that poor Federal policies will set the wrong example for other governmental levels as they address similarly complex policy, service, and technical issues. Because of the vital role of government information to democracy and productivity and the tremendous resources required to meet Federal information mandates, these issues are too important to be left only to Federal bureaucrats, obscured under the outmoded term, "paperwork reduction."

In summary, we urge revision of the Paperwork Reduction Act to serve as a fuller Federal Information Resources Management Law. To do so, it should incorporate the recommendations noted above to ensure recognition of the importance of Federal information policy to state and local governments; guarding against the loss of important information created or maintained in automated systems; and, providing better access to information about federally operated information systems.

We also note with concern the impediments to public access to information through proliferation of electronic products without consideration of user access needs, agency attempts to circumvent the U.S. Government Printing Office (GPO), excessive classification and secrecy, and inadequate participation in the U.S. Depository Library Program. We support the information policies adopted by the National Commission on Libraries and

Information Science (NCLIS), including:

- The public has the right to access public information.
- The Federal government shall guarantee the dissemination, reproduction, and redistribution of public information.
- The Federal government should guarantee the public's access to public information, regardless of where they live and work, through national networks like the Depository Library Program.

We also join NCLIS in urging that all branches of the Federal, state, and local governments and the private sector use these principles in developing information policies and creating, using, disseminating and preserving public information.

II. EDUCATION TECHNOLOGY CAPITALIZATION

Calls for education reforms intensify as dropout rates increase and our needs for a fully prepared work force go unmet. A less publicized proposition cites the undercapitalization of education compared with other enterprises as a key schools' crisis. By capitalization, we mean the use of technology in its many forms as an integral part of delivering a service, here education, not simply to supplement operations. Capitalization means investing in hardware, software, and their interconnections to assist teaching and student learning and aid in administrative work.

Two interrelated factors support this argument: We are using an inflexible 19th century model for educating people, and we invest a pitiable amount on research and development into technology that could radically change the way learning occurs, both for initial preparation and to renew knowledge and skills.

In this section, we briefly describe the current system's problems and propose that the Federal government take the lead in making education more capital intensive through technology. It must set a national capitalization agenda through a research and development program and support for state and local acquisition of necessary equipment and supplies, particularly in poor areas. While we emphasize the need to incorporate technology into elementary and secondary schools in the following discussion, many colleges and universities lag behind in this area. Institutions with larger populations of disadvantaged students need particular support in capitalizing instructional activities.

A key Federal achievement would be an Education Reconstruction through Technology Act of 1992, to provide bonding authority or low-interest loans for local education agencies (LEAs), libraries, and higher education institutions, particularly those in distressed communities, to purchase equipment and establish their own computer infrastructures. This would allow them to increase staff and student use of computers in the learning process and provide links to local and national networks for information interchange.

The Education Technology Capitalization Dilemma

During the Industrial Revolution, we saw cottage industries give way to large-scale, capital-intensive endeavors. We developed a new infrastructure to support new industries and facilities. The nature of work has changed. A person who created a total product or major parts of it now may deal with only a small part of a highly mechanized production process.

We are now in an Information Revolution, which is changing the nature of the way we live, work, acquire knowledge, and play. Computerization and the application of related technologies are generating fundamental changes in most organizations, including such service industries as banking, insurance, and library and information services.

While arguments can be made about the dehumanizing aspects of this evolution, the negative features can be seen as a function of application. Where workers have been able to use technology as a tool rather than the changes making them servants to the machine, the charge of dehumanization is unfounded. In education, we would insist that the teacher or instructor be the manager of technology.

During the earlier period of technological revolution, education tinkered with improvements in organizational structure and tried to solve other short-term problems brought on by the consolidated one-room school houses. It was not creating a new infrastructure to match advances made in other services, businesses, and industries. The fundamental classroom process did not change nor did the basic tools required of educators.

The new era of interactive media, expert systems, fiber optics, and artificial reality seem tailor-made for education applications. To harvest its fruits, we must be willing to consider changes in the learning infrastructure and process, based on an infusion of capital into education functions.

The 19th Century School Today

Among others, Dr. Larry Cuban of Stanford University

has examined the traditional classroom in his books, *Teachers and Machines: The Classroom Use of Technology Since 1920* (New York: Teachers College Press, 1986) and *How Teachers Taught: Constancy and Change in American Classrooms 1890-1980* (New York: Longman, Inc., 1984). The basic classroom process he describes has endured since at least 1890 and features teacher lectures and questioning of students, with supplementary activities such as assigned readings and chalkboard exercises. The physical structure is designed to meet the traditional aim of education: compel students to attend school and receive information in an orderly, efficient manner. Hence, we have "self-contained classrooms, age-graded levels, standard class sizes, and uniform teaching loads."

Over the years, various innovations have been imposed upon this regimen, including slate and chalk, books, films, television, and computers. However, Cuban justly argues that most such innovations never have become the panacea promised by reformers. Many are still around but as filler, supplementing traditional teacher activities as a palliative for the boredom of lecture. They do not provide an alternative system for imparting knowledge to students.

The Technology Investment Problem

Lewis J. Perelman of the Hudson Institute has suggested that we examine education as a business or industry and analyze its comparative expenditure on labor and capital. For example, costs for labor in education comprise 93 percent of output while the relation of labor costs to output is 54 percent in the average business and 46 percent in high technology concerns. The average research and development firm spends 100 to 1,000 times more for capital than education and those firms emphasizing high technology tasks dedicate thousands times more.

A U.S. Office of Technology study found that education has the lowest level of capital investment compared with other major industries, about $1,000 per employee. The average for the entire U.S. economy is about $50,000, with some high-tech industries investing upward of $300,000. Some more labor-intensive "service" businesses devote $7,000-$20,000 per employee.

Perelman also advances the interesting idea that "education is the only business where the consumer does the essential work." The productivity of the student or learner, not the staff, is what counts. If we consider the student as the "worker," the average investment for education drops to $100 per person.

Examples of Programs

Despite the intractable 19th century education model and the lack of capital investment, the picture is far from bleak. Below, we have noted a handful of many positive projects that point to a lowering of the barriers to change. Where technology capitalization advances are made, improvements in student performance often have followed and the use of technology multiplied:

Orangeburg (SC) School District 5. District 5 has about 6,600 students, 80 percent low-income and minority. In pretechnology 1984, among other problems, its dropout rate was 35 percent over the four-year high school program.

In the early 1980s, a committee of teachers and district officials drew up a computer master plan. Students below standards in reading and mathematics had to take an extra period of computer-assisted and -managed instruction. Computers were to be placed in all regular classrooms, with a unit for every five students and a goal of giving students two-three hours of weekly work on them.

Since the project began, the dropout rate has decreased to less than 10 percent. In 1988, 59 percent of the students were above average on basic skills tests. The District has received national awards for its achievements and became the first nonuniversity affiliate of IBM's program for discount computer purchases. As a result, two-thirds of the teachers have their own computers. College-level computer science courses and courses on software also are available for employees.

Job Skills Education Program (JSEP). JSEP was developed for the Army for about $10 million as a prototype, computer-assisted way to instruct soldiers in the academic competencies needed for service work assignments. It since has been revised for civilian use and pilot tested by the New York State Education Department and the White Plains (NY) Board of Education at the Continuing Education Center of the White Plains City School District.

Most pilot participants were part of Adult Basic Education (ABE), General Education Diploma (GED), and English as a Second Language (ESL) programs. They spent less than the equivalent of a full semester of traditional schooling in the JSEP program. Eliminating high and low scorers, 61 students remained for the pre-and posttest analysis and had an average score gain of 34 percent. The 41 ABE/GED participants also took the Test of Adult Basic Education before and after their JSEP experience, achieving a 1.26 grade level gain in reading, and 0.94 in mathematics.

Besides the positive data, an informal survey of the few dropouts found they had left the program to accept jobs. Participant surveys also were administered and showed a clear trend of students being pleased with the program and their performance.

Videodisc-based Elementary Science Curriculum. Texas recently adopted a videodisc-based curriculum as

an alternative to the traditional textbook-based science program. Given the State's high profile in the textbook selection process, this move has national significance for the introduction of technology-based curricula.

The Potential

While these kinds of projects are a significant step in the right direction, they seem mundane compared with the potential inherent in technology like virtual or artificial reality. Perhaps more to the point in illustrating our proposed conversion is the highly effective "electronic classroom" of Chris Held, a fifth-grade teacher in Bellevue, Washington, described in the September 1990 issue of *Instructor*.

Mr. Held characterizes his role in the largely student-centered classroom as the "guide on the side" rather than the "sage on the stage." He espouses individual or small group learning and an interdisciplinary curriculum that teaches through large-scale projects incorporate learning in multiple fields. The class itself has no desks. Rather, there are six work stations that the students can move to for different learning experiences, incorporating both computer and noncomputer instructional media.

We propose to use computer-based, video, and broadcasting technology, as Mr. Held has, to capitalize the learning process. As David Foster of the Southwest Educational Development Laboratory noted in a recent *R&D Preview* issue, there is potential for restructuring or reorienting how we teach, where we teach, and what we teach through such innovations as:

- courses in computer-aided design and manufacturing, robotics, and other areas in which technology is the curriculum;
- opportunities for students to have individualized, self-paced instruction in which the teacher assumes the role of consultant rather than being the direct purveyor of knowledge;
- expanded distance learning opportunities; and
- the use of technology such as hypertext, artificial intelligence, and artificial reality to offer students more realistic, real-time opportunities to hone thinking, reasoning, decision making, and other higher order skills.

The Teacher as the Key

Teachers are the key element in any change process. If they are on board, change should occur. Recent trends toward computerization in every area of life are providing a natural evolution to this end. For example, the Thanks to Teachers program sponsored by the National Foundation for the Improvement of Education, Apple Computer Inc., Group W Television, and the National Alliance for Business did a phone survey of their 231 semifinalists. The research found that 72 percent of the teachers felt the lack of technology in schools was a barrier to their ability to teach. Eight in ten reported that a personal computer would help them a great deal.

A 1990 Bank Street College of Education Center for Technology in Education study also indicates this enthusiasm. As we have exposed more educators to technology applications through academic preparation or other means, there is a growing supply of technologically literate people. If given a nurturing environment, teachers could be spontaneous, internal capitalization reformers.

The Bank Street study stresses the potential of technology, once fully integrated into the classroom by experienced teachers, for achieving many of the goals sought by current school reform efforts. These include raising expectations for students, making classrooms less teacher-centered, and individualizing instruction.

Conclusions

We can draw several conclusions from existing education technology capitalization projects and associated research:

- Carefully planned and implemented technology-based activities result in improved performance and satisfaction in teachers, students, and administrators;
- Technology begets technology, as illustrated in Orangeburg, where the initial effort to improve low performing students led to teachers owning computers, price breaks on equipment purchases, and introduction of opportunities to pursue additional technology-oriented course work;
- Technology can be an administrator's idea but if teachers are not willing participants in developing a program and students are not interested, the effort will fail. Technology can mean fewer classroom hours; computerized curriculum that could be updated often and rapidly; fewer tedious administrative tasks; more free time to go one-on-one with students to solve special problems, experiment, and investigate new ideas. The sense is that the teacher can become even more of a professional.
- It is important to bring business into the equation by spurring development of education-specific equipment and planning programs that will be relevant to their needs. The cost of developing hardware and software can be significant. There must be incentives for businesses to undertake the necessary research and development. Also, the U.S. Department of Education must perceive such research and development to be an integral part of their mandate; and,
- Once the incentive and infrastructure for capitaliza-

tion is present, programs seem to blossom and grow without much prompting. All we need is a nurturing leadership that is willing to provide an environment ripe for innovation.

The Federal Role in Education Technology Capitalization

We must provide the tools by which a technology-receptive environment can be established in each educational institution. The Federal government can help mobilize efforts to this end.

No firm direction currently exists. There are few Federal resources devoted to education technology capitalization efforts. Some of these are afterthoughts or by-products of other, larger programs. For example, both the Chapter 1 program for remediation of educationally disadvantaged students and the Individuals with Disabilities Education Act for youth with disabilities permit purchase of technology for use in associated programs.

Others have a main purpose that is more directly related to education capitalization but these are modest in scope and funding. They include Chapter 2 State Block Grants, the Star Schools Program, and the Secretary's Fund for Innovation in Education.

Finally, some Federal programs are suited for completing capitalization projects but have yet to be given such a mandate. The system of education laboratories and centers, under the U.S. Department of Education Office for Educational Research and Improvement, is a prime example.

In summary, we believe the Federal government can and should be much more responsible for helping to capitalize education technology. We outline below our recommendations for enhancement of their contribution. The profit could be substantial if we can extrapolate from the 1989 J.D. Fletcher *Report on the Potential of Interactive Videodisc Technology for Defense Training and Education.* According to it, interactive video in higher education effectively raised the expected performance of students in the 50th percentile to the 76th; resulted in an increase of 45 percent in time on task; and generally was more cost effective and had more sustained effect than traditional instruction.

Education Reconstruction through Technology Act of 1992

We have scarcely begun to tap the potential of technology in education. The literature is replete with examples of applications that have distinctly improved learning for students, particularly those from disadvantaged backgrounds. However, we have failed to provide a means for many education institutions to invest in related equipment and support services. They either must be in wealthier areas to afford such purchases or must rely on the beneficence of corporate donations. These are options that leave a considerable number of people outside the technology capitalization stream.

There are two complementary aspects to this problem that must be combatted. First, the Federal government must provide the nationwide vehicle for making the country an automated network for transmitting computerized programming. Then, there must be an infrastructure through which local schools, libraries, and other education institutions can tap into the network, both on the macro level of connecting to the national network and micro level of ensuring that individual institutions have resources to support purchase of computers and other related technology.

A large step has been taken toward the nationwide network. The Congress has passed, and the President signed, legislation to implement and sustain the National Research and Education Network (NREN), a nationwide computer highway to transmit digital information. Senator Albert Gore, Jr. (D-TN) originally introduced the National High Performance Computing Technology Act of 1989.

The aim of the legislation is to connect universities, colleges, research organizations, public libraries, and schools with the system. One cited NREN use would be for libraries to share expensive journals and other periodicals using digital document delivery. Schools and school and public libraries connected to the NREN could swap instructional programs and other electronically accessible information.

So, we will have a computerized telecommunications network. The next question is how to support linkages of individual schools and libraries, other than those mentioned above. The principal participants now must meet to plan the NREN implementation. One option they should consider involves the various state lottery systems. The original purpose of most, if not all, of the lottery programs nationwide was to help fund education. Each program provides a computer connection to most communities within a state and could serve as a ready-made link in the NREN chain.

The cost of connecting to NREN or a similar system includes the need to support "wiring" of local institutions. This includes costs associated with purchase of telecommunications and computer equipment. Of course, securing equipment can be extremely useful within the school or library even if the connection to the network is not made. The technology can be used effectively both for local linkages (for example, between wealthy and poor districts to share resources) and to further computer literacy and instructional opportunities for students or patrons. So all indications are that education technology capitalization can and should be facilitated to provide optimal education opportunities for all students.

The major remaining problem is that schools and libraries in depressed areas are peremptorily excluded because of the lack of money to build education capital. A mechanism must be created to allow *all* education institutions the opportunity to participate in the technology revolution.

We believe the Federal government must take the lead in making education more capital intensive. When the nation has been faced with past national crises, such as that now facing education, it has responded with important legislation like the Reconstruction Finance Corporation and the Rural Electrification Act.

The Reconstruction Finance Corporation (RFC) was created in 1932 to make loans to stimulate the Depression economy. It initially had authority to loan money to such entities as railroads, insurance companies, and banks. The obvious goal was to help them weather the rough times. The RFC loan authority subsequently was extended to include states, municipalities, and other public agencies to aid agriculture projects and public works.

The RFC was considered to have lessened the impact of the Depression but really came to the fore during World War II when it had a major role in financing war industries. Its functions eventually were broken up and distributed to other agencies but during its time made loans totalling over $13 billion.

The Rural Electrification Act of 1936 established a system of low-interest loans and loan guarantees to rural electric cooperatives, power companies, municipalities, and other qualified bodies, for construction and operation of power lines and plants in rural areas. Originally created to raise the rural living standard and keep people from moving to urban areas, the Act has helped provide electric power to 98 percent of the nation's farming areas. It since has been extended to cover support for expansion of telephone service and, in 1990, economic development activities.

The telephone provision is doubly interesting with the recent Federal appeals court ruling that regional telephone companies can begin offering information services to customers. With such entities as the REA providing an impetus, there are virtually no locations in the United States without phone service. This means that even without NREN, schools might be able to connect to telephone information services if they have the proper equipment.

Successful programs like the RFC and REA should serve as models for the Federal government. We believe it must act the same way for education. It can do so relatively simply, with little Federal cost, by crafting the Education Reconstruction through Technology Act of 1992. This legislation would provide a national bonding authority or a low-interest loan program for school districts, libraries or consortia, and higher education institutions, particularly those serving larger numbers of disadvantaged students or patrons, to raise money to acquire technology. The resulting effort can be centered at the Federal level or in states with Federal support. All areas of the country should have an equal opportunity to acquire technology and incorporate it into the learning process.

The least we can do now is act as we have in the past, meeting our education technology capitalization crisis head on through bonding authority or low-interest loans to help students learn through an increasingly technological world. We should be willing to commit to developing electronic highways to help them fulfill their potential, eventually linking classrooms and learning resources around the world in an automated learning network.

As an integral part of this effort, Representative Major R. Owens (D-NY) has introduced the Educational Research, Development, and Dissemination Excellence Act. Among other provisions, the bill proposes creation of a National Networks and Telecommunications Division. This office would develop an interactive electronic network to link United States Department of Education functions such as the ERIC Clearinghouses and the national research laboratories and centers to share information and resources. The network would be extended to libraries, schools, universities, colleges, and homes and also connect to any electronic online dissemination system operated by the Government Printing Office.

We believe that the Owens network fills an important gap in the information and dissemination chain linking Federal sources internally and with external agencies. It should be implemented within the context of our proposal or independently.

Recommendations

1. We propose the Education Reconstruction through Technology Act of 1992. This legislation would provide a national bonding authority or a low-interest loan program for education institutions, especially in poorer areas, to raise capital for acquisition of technology. The purpose would be to further computerized instruction and related activities in schools and libraries; link such institutions locally; and provide the means for them to connect with national education and research networks.

2. We support the National Networks and Telecommunication Division proposal of Representative Major R. Owens.

3. The U.S. Department of Education's Office for Technology Transfer, which now exists only on paper, should be fully funded and staffed. It should be raised to Assistant Secretary level and charged with oversight of Federal education technology capitalization activities.

4. A minimum percentage of major Federal program allocations (e.g., Chapter 1 and Individuals with Disabilities Education Act state grants) should be used for technology capitalization projects.

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5. Resources should be provided to promote districtwide planning and implementation of technology programs.

6. To investigate technology capitalization problems and create development potential, there should be substantial Office for Educational Research and Improvement funding for:

- a comprehensive evaluation component built into the capitalization agenda to determine how technology works best with target student populations. Implementation always must be accompanied by evaluation, which does not appear the case with much "off-the-shelf" software;
- demonstration grants for state and LEA capitalization projects and dissemination of innovative results; and,
- a mandate to Federal education laboratories and centers that capitalization research and development is a priority.

7. The U.S. Department of Education must advocate for building competency in developing and using technology into teacher and school administrator education programs. We also need a demonstration program to support grants for collaborative projects between LEAs and institutions of higher education. Prospective teachers and administrators would intern at LEAs that have planned or existing education technology capitalization programs.

8. Businesses should be given tax incentives to create hardware/software for schools, participate in developing related curriculum, and develop the "education work station" as the education "enterprise of the future." They must be motivated to develop software curricula and other technology that is tailored to specific state instructional needs rather than producing primarily for standardized applications across the country.

III. REAUTHORIZATION OF THE HIGHER EDUCATION ACT

For more than 25 years, the Higher Education Act (HEA) has played a key role in American higher education. The Act's student assistance programs have enabled millions of students to obtain postsecondary education and training that they would not have otherwise been able to afford and, in doing so, have supplied the nation with a skilled work force. The Act's other programs have provided direct institutional support for colleges and universities to perform diverse instructional, research, and service functions.

The 1992 amendments to the Act (S. 1150 and H.R. 3553) must reaffirm the Federal commitment to American higher education. To do so, the amendments must accomplish four major goals that are fully consistent with the Act's historical purposes:

- Provide student assistance programs to assure Americans that education beyond the high school level will not be reserved for the wealthy.
- Help maintain an adequate supply of qualified labor in areas of national need. Teachers are a top priority.
- Help preserve and enhance facilities, libraries, and information networks in American higher education.
- Encourage innovation that will bring a vital system of American higher education into the next century.

The Regents recommendations for the 1992 amendments to the HEA are designed to achieve these four goals.

Goal 1: The 1992 amendments must extend opportunity for higher education through: 1. early intervention programs for disadvantaged youth; 2. strengthened grant, work-study, and loan programs; 3. a responsive financial aid delivery system; and 4. improved accountability for Federal student aid expenditures.

Early Intervention for Disadvantaged Youth

Over 20 percent of American children live below the official poverty line. The percentage is twice as high for black and Hispanic children. Because of their economic disadvantage, poor children are not as healthy as other children and they are not as successful as other children in school, in the workplace, or in college. The result is a tragic loss of precious human resources that must be addressed by comprehensive national policies of which education is one key component.

To truly extend opportunity, Federal student assistance must be supplemented by intervention programs that raise aspirations and attainment of disadvantaged youth when there is still time to make a difference. Successful intervention must include direct services and assurances that college will be an affordable option. Both the House and Senate have embraced the early intervention concept. Both reauthorize TRIO programs at higher funding levels than in current law, and both propose new early intervention programs. The two most promising proposals are in the House bill: the National Liberty Scholarships and Partnerships and Technical Assistance for Teachers and Counselors programs.

TRIO Programs. The TRIO programs include Talent Search, Upward Bound, Student Support Services, the Ronald E. McNair Post-Baccalaureate Achievement Program, and Education Opportunity Centers. By providing competitive grants to a wide range of providers, these programs help identify individuals from disadvantaged backgrounds, prepare them for postsecondary education, give them supportive services while they are undergraduates, and motivate and prepare them for advanced study.

National Liberty Scholarships and Partnerships. Proposed by Representative Lowey of New York, this initiative would encourage the states to coordinate early intervention programs in conjunction with their localities and private organizations and individuals and would require them to match Federal appropriations on a dollar-for-dol-

lar basis. The National Liberty Scholarships component would encourage each state to establish or maintain a scholarship program to offer new grant aid to high school graduates from the state's neediest families. The grants would be used to supplement Pell and existing state grants to cover up to an amount equal to as much as 75 percent of attendance costs at a four-year public college.

The National Liberty Partnerships component would encourage states to establish or maintain programs for counseling, outreach, and support services to youth at risk of dropping out; establish or expand prefreshman summer programs to help disadvantaged students to succeed in college; and provide information about college financing options to students and parents.

Technical Assistance for Teachers and Counselors Program. H.R. 3553 authorizes the Secretary to award grants to local educational agencies to obtain specialized training for guidance counselors, teachers, and principals to counsel students about college opportunities, precollege requirements, the college admissions process, and financial aid opportunities. Local educational agencies with college-going rates significantly below the national average and with proportions of disadvantaged students significantly above the national average are eligible for two-year grants. This program would provide much needed help for schools in New York's most disadvantaged communities.

Adequate and Predictable Federal Grant Aid

The purpose of Federal grant aid is to reduce financial barriers to college for low- and middle-income students. The HEA authorizes three distinct grant programs to achieve this end.

The Pell Grant program is the largest. It provides portable grants to the nation's neediest students, with eligibility and award size being determined by Federal formulas. The smaller Supplemental Educational Opportunity Grant (SEOG) program enables campuses that match Federal funds with their own monies to make grant awards to their own needy students. The even smaller State Student Incentive Grant (SSIG) program provides funds to the states, which must be matched dollar-for-dollar, to encourage states to provide need-based grants to their college students.

Since the 1986 amendments, grants from these three Federal programs have become less effective in reducing financial barriers for students because their purchasing power has eroded steadily. Also the Pell program has been unpredictable because maximum awards have not reached authorized levels, less-than-half-time students have been denied grants in most years, and applicants at the upper end of the eligible income range have been denied grants due to budget constraints.

To help students make informed decisions about whether and where to go to college, the 1992 amendments must restore purchasing power to all three Federal grant programs. They also must make the Pell Grant program the reliable foundation of opportunity that it was originally intended to be.

Pell Entitlement. Qualified Pell applicants should have a contractual right to the grant funds for which they are eligible beginning in 1993-94, the first award year after current Federal budget constraints expire. Such a contractual right would encourage disadvantaged students to prepare for higher education and it would enable all students and their families, as well as the states and institutions of higher education, to make informed decisions about how to finance college costs.

Maximum Pell Grant. The maximum Pell Grant is the amount received by students whose personal and family resources are so low that no personal or family contribution is expected. Under current law, the value of a maximum Pell grant is a function of the number of eligible Pell applicants and the level of appropriations. Once the program becomes an entitlement, the maximum grant can reflect the actual costs of going to college. For 1993-94, the maximum grant should be increased to $4,500 to cover about half of the costs of attendance at a four-year residential public college. After 1993-94, the maximum grant should be adjusted for inflation each year.

Living Cost Allowance in the Pell Award Calculation. Both bills under consideration change the way a Pell award is calculated. Under current law, the award is capped at 60 percent of allowable costs. Under the new approach, a grant would be capped by the sum of two separate limits, a living cost allowance and one-fourth of tuition. With adequate appropriations, this approach would be an improvement because it would result in larger Pell grants for the growing number of low-income recipients who attend public institutions as commuters living with their parents. Under current law, these students receive lower Pell Grants than they would if they had gone to college away from home.

Pell Eligibility for Less-than-half-time Students. Part-time students make up one third of the undergraduate enrollment in New York State. Most of these students are adults with adult responsibilities and unique financial needs. Two thirds of them are over 25 years of age; four-tenths of them are women over 25.

Under current law, full-time and half-time-or-more students are eligible for Pell Grants but less-than-half-time students may only receive a Pell Grant if appropriations

are sufficient for all other recipients and if such students are at the highest end of the Pell range of need. The provision in H.R. 3553 that assures Pell eligibility for up to the equivalent of five semesters of less-than-half time study should be incorporated into law.

Pell Grants for Accelerated Study. Many undergraduates want to accelerate their study in order to proceed quickly to graduate school or to reduce their time spent out the labor market. Accelerated Pell also is useful for disadvantaged students who take longer to complete their baccalaureate degrees. New York's Tuition Assistance Program (TAP) permits TAP recipients to use their eligibility during summers or other periods beyond the standard academic year. Pell Grants should be available for accelerated study as provided in S. 1150.

Supplemental Educational Opportunity Grants (SEOG). This program should be reauthorized with funding levels that reflect student need. Both the Senate and House bills raise the SEOG institutional matching requirement from 15 to 25 percent. The current match should not be raised because public institutions do not have funds to put into student grants and private institutions already overmatch SEOG substantially. New York's private colleges and universities spend over $600 million on student grants, nearly 30 times the SEOG grants they award.

State Student Incentive Grant (SSIG) Program. To preserve the state grant programs that are threatened by budget cuts across the nation, the SSIG program should be reauthorized and adequately funded. As provided in H.R. 3553, SSIG funds in excess of $75 million should only be allotted to states that increase their own spending on need-based grant aid. This requirement would be an incentive for the states to increase spending on grant programs as they increase their public sector tuition rates and cut their higher education budgets. Also, the $5,000 SSIG award cap in S. 1150 is preferable to the $4,000 cap in H.R. 3553.

Federal Loans

Borrowing to pay for college is not an appropriate or prudent option for all students. But for some students and parents, loans are a reasonable way to finance the large and worthwhile investment that a college education can be. In recognition of that fact, the HEA authorizes four Federal loan programs. Two types of loans, Perkins and Stafford, offer large subsidies to students with demonstrated financial need. Two other types of loans are unsubsidized except for being insured against default, Supplemental Loans for Students (SLS) and Parent Loans (PLUS).

Despite claims to the contrary, the majority of college students do not take out Federal loans. At colleges and universities in New York in 1990-91, where federally insured borrowing approached $1 billion, no more than 40 percent of all students in degree-credit programs had Stafford loans and no more than 10 percent used SLS or PLUS loans. At The City University, where low-income students are concentrated, fewer than 5 percent of students had Stafford loans. At the State University, fewer than 20 percent had Stafford loans. At New York's independent institutions where prices are much higher than in the public sectors, somewhere between 30 and 60 percent of students had Stafford loans.

Demand for loans went up in 1990-91 in New York. There were nearly 10,000 more Stafford loans taken out at New York's public and independent colleges and universities in 1990-91 than in 1989-90. Demand was up even for the unsubsidized loans with relatively unfavorable terms. In 1990-91, New York students at public and independent institutions took out 22 percent more SLS loans than they had the year before and their parents took out 23 percent more PLUS loans. The outlook is for more demand for loans.

Both the House and the Senate are considering proposals to establish a new direct lending program at campuses to replace the existing loan programs. However, there are inadequate and conflicting reports on the potential impact of a direct lending program. As a result, there is likely to be a demonstration program in the 1992 amendments rather than full implementation.

Regardless of how the loan programs are financed or structured in the 1992 amendments, they must continue to supply adequate capital at lowest possible cost to meet the needs of students and their families. If Pell appropriations are adequate, student borrowing will not be excessive. If they are inadequate, loans should be available as an option.

Annual Loan Limits on Low-interest Stafford Loans. Annual Stafford loan limits for full-time, full-year borrowers should be raised to amounts in the House's Direct Loan program: from the current $2,650 to $6,500 for first- and second-year undergraduates, from the current $4,000 to $8,000 for other undergraduates, and from $7,500 to $13,000 for graduate and professional study. The new annual limits should be prorated if a borrower attends less than a full year, as proposed in both the House and Senate bills.

Other Federal Loans. Regardless of what they are called, there should be Federal loan programs that provide self-insuring unsubsidized loans to students who are ineligible for low-interest Stafford loans and to Stafford borrowers whose aid packages do not meet their need. Annual loan limits for unsubsidized loans should reflect costs of

attendance after all other sources of aid have been exhausted and parents should have access to capital to cover their expected share of costs.

Loans for Accelerated Study. For all loan programs, students should be permitted to borrow more than the annual loan limit for accelerated study beyond a standard academic year. This extension would be consistent with the proposed extension in the Pell Grant program in S. 1150.

Financial Aid Delivery System

The delivery system for Federal and non-Federal aid has become so complex that it poses a barrier to the very population it was intended to serve. Each year, applicants must complete application forms that are confusing because of Federal requirements about how items must appear. Applicants receive two separate determinations of their need for Federal aid. And cumbersome procedural requirements — such as multiple and delayed loan disbursement, verification of immigration and draft registration status, and face-to-face entrance and exit loan counseling — slow down the delivery process. The 1992 amendments should ease the delivery of aid from all sources.

Single Federal Need Analysis. Both bills under consideration would establish one Federal need analysis methodology to determine eligibility for all Federal aid, although the House and the Senate have different proposals for what that methodology should be and what data elements should be used. A single Federal need analysis is a step forward.

Aid Application Process. Both bills permit Federal aid applicants whose personal and family incomes are very low to be eligible for aid without filling out application forms, permit continuing students to update rather than redo their aid applications, and give financial aid administrators discretion for handling special circumstances. These are significant improvements to current law.

Application Forms. The House bill requires a free Federal application form with only Federal data elements and forbids states and institutions from passing any costs of obtaining additional data elements on to students. In contrast, the Senate bill requires the Secretary to print and distribute a free Federal form but permits the form to have non-Federal items so long as Federal items are clearly distinguishable from non-Federal items and there is no charge for state items.

Under the current application system, applicants may use a free Federal form if they want only Federal aid. Or, for a nominal fee, they can use a single "common form" that enables them to be considered for aid from Federal, state, and institutional sources because it contains requisite data elements.

Most of New York's aid applicants use a "common form" custom designed each year for New York State residents. Besides providing one-stop shopping for aid, the New York State "common form" permits application data to be transmitted electronically to New York's institutions and to the Higher Education Services Corporation, which speeds determinations of eligibility and aid packaging.

The House and Senate bills would eliminate the "common form" option and the consolidated services that flow from it. Without a state-specific "common form," applicants would have to submit a different form for every type of aid they sought; electronic data transfer and packaging would break down, and aid delivery would be slowed. This would be a step backward, especially in a state like New York where most students receive aid from more than one source.

Improved Accountability for Federal Student Aid Expenditures

To maintain public confidence in Federal student assistance programs and make the best use of the Federal tax funds going to students, there must be accountability measures in the 1992 amendments that will prevent misuse of funds and outright fraud. The many amendments to improve accountability in the House and Senate bills reflect the importance of this issue.

Under current law, institutions may participate in Title IV if they meet three conditions. They must be authorized by the state in which they are located to offer education beyond the secondary level, they must be accredited by a nationally recognized accrediting agency or association, and they must be certified by the Secretary of Education as having the financial and administrative capacity to administer Title IV programs.

As student complaints about some schools have surfaced and as loan defaults have become a large and growing cost in Title IV, problems with the current accountability system are apparent. In brief, those problems have called into question the effectiveness of the accrediting associations, the states, and the Secretary in assuring the quality and integrity of Title IV programs.

The Senate bill strengthens each leg of the existing three-part system. In contrast, the current House bill strengthens the role of the Secretary and the states but severs the relationship between accreditation and Federal student aid. If accreditation is to continue to play a pivotal role in assuring the quality and integrity of higher education institutions that receive Federal assistance, then accrediting bodies must be more accountable to the public. The Senate

version would require accrediting bodies to report negative actions against higher education institutions to the Secretary and the appropriate State agencies. This is a step in the right direction.

Regardless of other accountability measures that are established, there are some important measures that should be part of the 1992 amendments.

Strengthened State Role. State governments can play a unique role in improving institutional integrity in Title IV because, unlike accrediting associations, they are independent and accountable to the public and, unlike the Department of Education, they are close to the schools operating within their borders. For decades, the State of New York has had a comprehensive system of state oversight for all its institutions, which range from world-class universities to short-term vocational schools. This system has linked state financial aid to state approval of academic programs and provides a model for the nation.

State-Federal Partnership Approach. The State Approving Agency approach in the House bill was originally introduced by Representatives Goodling of Pennsylvania and Lowey of New York. It establishes a partnership arrangement in which states could enter into agreements with the Secretary to establish and enforce comprehensive performance standards for institutions. Through the agreement process, the states and the Secretary have the flexibility to develop meaningful and appropriate standards rather than uniform procedural requirements. In addition, the agreement process prevents the Secretary of Education from transferring to the states an unlimited number of Title IV requirements and responsibilities, as the Senate bill permits.

Federal Funding for the States. The House bill requires the Secretary to reimburse states for the costs of performing agreed-upon functions and authorizes an amount equal to one percent of appropriations for Title IV. The Senate bill authorizes $10 million for start-up costs for the states and requires a long and open-ended list of functions to be performed by the states. In the Senate bill, the states could cover the costs of performing their responsibilities by charging fees to institutions.

Clearly, if the states are to play a meaningful role in protecting the Federal investment in student assistance, then the states will need Federal funds to do the job. Neither states nor institutions are in a position to take on additional and open-ended Federal mandates without adequate Federal financing.

Performance-based Regulatory Relief for Institutions. Both the House and Senate bills have provisions that would trigger special oversight of institutions based on performance indicators. To balance that approach, the House bill provides regulatory relief based on performance indicators. Regulatory relief for good performance is a good idea.

Improved Information Systems. One cause of inadequate Federal oversight of institutions participating in Title IV programs has been the lack of an integrated information system about those institutions. Until an information system exists, performance indicators cannot be used to identify institutions for either additional oversight or regulatory relief.

The House bill has several provisions that would lead to a better information system. It requires the Secretary to establish an institutional database for all Title IV institutions in which each institution has a unique identification code. The database is to be compatible with the Integrated Postsecondary Education Data System (IPEDS) where enrollment and finance statistics are located. Institutions are required to submit IPEDS data in a timely fashion.

Goal 2: The 1992 amendments must help prepare a work force to meet the nation's current and projected needs. Top priorities are to improve: 1. programs that recruit, train, and develop teachers and school administrators; and 2. programs for people, particularly women and minorities, seeking education and training in areas of national need.

Teachers and School Administrators

Although there is no overall shortage of teachers in the United States, there are shortages in some geographic and subject-matter areas and pervasive shortages of black and Hispanic teachers. There are desperate shortages of teachers in our nation's cities. In New York City, over 60 percent of the 3,721 new teachers hired in September 1990 lacked both teaching credentials and experience.

Teachers alone cannot change all that is wrong in our nation's schools but school improvement will not occur without them. Improving the nation's schools depends on recruiting talented people of all ages and backgrounds, especially underrepresented minorities, into the ranks of teaching, and keeping them there; providing adequate preservice preparation for teachers; providing support for novice teachers; and offering opportunities for professional development to practicing teachers and school administrators. In recognition of these facts, both bills under consideration in Congress contain provisions that would help improve the quality of teaching and learning in American schools.

Recruiting New Teachers. Financial assistance is one way to help recruit talented individuals into teaching.

Title V programs that would increase financial assistance for prospective teachers include: Paul Douglas Teacher Scholarships for outstanding high school graduates, the House's Teacher Opportunity Corps for paraprofessionals working in schools, the Senate's Teacher Corps for college students who agree to teach in shortage areas with low income students, and the Senate's Minority Teacher Recruitment program. In addition, students with baccalaureate degrees who enroll in educational programs leading to teacher certification should be eligible for Federal Title IV loans and work-study jobs as provided in the House bill.

Beyond financial assistance, other recruitment approaches are needed. The Mid-career Teacher Training program in the House bill helps prepare individuals to move from other careers into teaching and should be reauthorized. The House version of a National Mini Corps could help attract college students into teaching. The House bill's Teacher Opportunity Corps would enlarge the pool of minority teachers by enabling colleges and universities to offer special teacher preparation programs for paraprofessionals already working in schools. The Senate bill's Minority Recruitment program would provide funds for special recruiting activities.

Reforming Teacher Preparation and Credentialing. Several important provisions in the House and Senate bills would improve preservice teacher training and teacher credentialing. Both bills authorize a National Board for Professional Teaching Standards to conduct research and development in teacher assessment and certification. The House bill authorizes the establishment of "teaching schools" where colleges and universities, state and local education agencies, and the business community could combine forces to train prospective and beginning teachers under the guidance of master teachers. Finally, both bills provide grants to the states for developing alternative routes to certification that would enlarge the pool of potential teachers. New York State is already developing performance-based examinations as an alternative route to teacher certification.

Retaining and Developing Teachers and School Administrators. Retaining teachers and renewing their professional skills are top priorities for the 1992 amendments. The Senate-proposed Christa McAuliffe Fellowship program provides states an opportunity to organize their programs for professional growth for outstanding teachers. It should be reauthorized with adequate funding.

In addition, the House bill's State and Local Programs for Teacher Excellence authorizes a comprehensive effort to improve teacher quality. It would permit states to develop a wide range of quality improvement programs, including establishing State Academies for Teachers and State Academies for School Leaders. The Senate's Middle School Demonstration grants, Early Childhood Teacher Staff and Professional Enhancement grants, and grants to improve teaching of foreign languages would enhance professional development in areas of education that are often neglected.

Other Work Force Needs

Both the House and Senate bills maintain important Federal support for work force development in areas of national need. Both bills address the acute need to educate and train individuals, particularly minorities, in the field of library and information science by authorizing the Secretary to make grants for fellowships and traineeships. Both bills address the nation's need for people with international skills by reauthorizing programs that support research and instruction in foreign language and area studies and centers for international business education. In addition, the Senate bill promotes international teacher exchanges. Finally, both bills address the acute need for more women and minorities in critical fields requiring advanced study by reauthorizing programs to recruit and prepare talented undergraduate students and to financially assist graduate and professional students.

Goal 3: The 1992 amendments must meet higher education infrastructure needs by helping to: 1. improve campus facilities; 2. preserve and develop academic libraries; and 3. strengthen institutions serving disadvantaged and minority students.

Campus Facilities

The physical infrastructure of American higher education is a vast national asset. But campus facilities are deteriorating while new facilities and equipment are needed to keep pace with new knowledge and technologies and to serve an increasingly diverse population of students and faculty. Federal grant and loan programs should help to preserve and improve campus facilities.

Both bills under consideration in Congress recognize the need for Federal support for campus facility projects. Both bills authorize the Secretary to address acute needs by making facilities grants. The Senate bill is more generous. It authorizes $400 million for facilities grants to state higher education agencies that would be matched by either state or institutional funds, while the House bill authorizes $100 million for matching grants going directly to institutions of higher education and another $25 million for grants to pay interest on loans. In addition, both bills reauthorize the College Construction Loan Insurance Association, a private for-profit corporation to provide

direct insurance, guarantees, and reinsurance on obligations issued for education facilities.

Libraries

America's academic libraries are an unparalleled and indispensable national information resource. As they enter the next century, they face daunting challenges posed by the continuing information explosion at home and abroad, emerging technologies, burgeoning disciplines and interdisciplinary fields, changing student demands, and deterioration of large parts of their collections. Both reauthorization bills recognize the important Federal role in preserving and enhancing academic libraries.

In general, the House bill is more favorable to academic libraries because it provides higher authorization levels for important Title II library programs. However, there are two provisions in the Senate bill that are more favorable to libraries than their House counterparts. First, the Senate bill explicitly includes library facilities in its Title VII facilities grants program while the House bill does not. This is important because technological changes in library operations often require alterations to existing facilities. Second, the Senate bill does not restrict the number of libraries that may receive grants to obtain materials published abroad, as the House bill does.

Institutions Serving Minorities and the Disadvantaged. Title III of the HEA provides Federal grants to strengthen academic programs, management, and fiscal stability at institutions serving students who are disadvantaged or from underrepresented minority groups. Both the House and Senate bills reauthorize existing grant programs with increased authorization levels. In addition, the Senate bill contains an improvement to current law. It adds an authorization of $45 million for grants to institutions where 25 percent or more of the students are Hispanic Americans.

Goal 4: The 1992 amendments must foster innovative approaches to improve opportunities for education. There are dozens of programs in the HEA that improve educational opportunities for special populations and purposes. But, over the long run, opportunity to obtain higher education will depend on whether colleges and universities can deliver their unique services cost effectively. To do this, American campuses will need to incorporate new knowledge about teaching and learning and new communications technologies into their everyday management, instructional, and research operations. This kind of change requires investment capital.

Both the House and Senate bills reauthorize the Fund for the Improvement of Postsecondary Education (FIPSE) program at $20 million to promote innovation in higher education. In addition, the Senate bill authorizes the Secretary to make grants to the states, with a 50 percent match, to promote innovation. This new program would permit statewide planning for innovation that has not been possible under Titles I and X of current law. Lastly, the House bill authorizes $10 million for grants to promote the use of telecommunications in delivering educational services.

Recommendations

1. The Congress must promote educational opportunity through early intervention programs such as the TRIO programs, the proposed National Liberty Scholarships and Partnerships program, and the proposed Technical Assistance for Teachers and Counselors program.
2. It also must promote educational opportunity with grant aid from the State Student Incentive Grant (SSIG) program, the Supplemental Educational Opportunity Grant (SEOG) program, and the Pell Grant program. Pell Grants should be entitlements for needy, full-time and part-time students and for accelerated study beyond a standard academic year. Maximum Pell Grants for the neediest students should be based on actual attendance costs.
3. The College Work-Study program needs continued support to promote educational opportunity.
4. The reauthorization must enhance educational access and choice through Federal loan programs that assure students and their families an adequate supply of capital at the lowest possible cost.
5. The Congress must simplify and streamline the Federal financial aid delivery system without impeding the flow of state and institutional student aid funds.
6. We must protect the Federal investment in postsecondary students by creating a state and Federal partnership for institutional integrity. The State Postsecondary Approving Agency provisions in H.R. 3553 offer a workable model based on New York State's experience.
7. Any reauthorization must facilitate recruitment of talented people, especially from underrepresented minority groups, into the teaching profession using financial aid, special recruitment programs, and special educational services. One example is the Teacher Opportunity Corps that would enable paraprofessionals teaching in schools to become certified teachers.
8. The Congress must help improve the quality of educators and foster school improvement by supporting new approaches to teacher preparation, in-service training, and credentialing.
9. We also must meet other national work force needs, especially to increase representation of women and minority group members, in areas such as library and informa-

tion science, international and language studies, the sciences and engineering, and the professoriate. The Congress can help by making grants available to support recruitment, training, and student assistance programs.

10. The reauthorized HEA must preserve and enhance campus facilities with grants and a national loan insurance program.

11. The Congress should aid academic libraries by providing grants to improve technology and information sharing; broaden the use of networking; develop library personnel skills; and preserve, enhance, and make more accessible library collections.

12. The Congress must provide grant support to strengthen institutions serving students who are disadvantaged or from underrepresented minority groups.

13. It also can support innovation in higher education through competitive grant programs for institutions and states.

IV. TRANSITION TO WORK: FULL ACCESS TO SERVICES FOR PEOPLE WITH DISABILITIES

Services for Persons with Disabilities: A Common Thread

The Federal programs authorized by the Rehabilitation, Individuals with Disabilities Education, and Vocational Education Acts have a common thread relating to people with disabilities: the potential for integration of service delivery in employment training and the promotion of independent living. This section describes New York State's continuing efforts to provide full access to all educational and vocational services and resources that have an impact on the employment opportunities of individuals with disabilities and their opportunity to live as independently as possible. We then use the issues and problems facing New York to formulate a series of recommendations for the scheduled reauthorization of the Rehabilitation Act.

The national commitment to full opportunity for people with disabilities is expressed in several Federal laws. The Individuals with Disabilities Education Act mandates a free appropriate education for all children with disabilities in the least restrictive environment. This Act broadened the responsibility of state education agencies to assure education for such children within the state, regardless of where they are being educated. The reauthorization of this Act has expanded access to educational and transitional opportunities that will lead to employment.

The Rehabilitation Act of 1973 provided clear evidence of Congressional intent to eliminate discriminatory practices against persons with disabilities. Subsequent reauthorizations have strengthened the employment focus and priority for serving persons with severe disabilities. Section 504 of the Rehabilitation Act specifically prohibits discrimination in any program receiving Federal assistance. Other sections prohibit employment discrimination, require affirmative action by Federal agencies and contractors in employing people with disabilities, and require that federally owned, occupied, or financed buildings are accessible.

The passage of the Americans with Disabilities Act, which prohibits discrimination in the private sector, and recent promulgation of implementing regulations also will protect individuals' rights in the workplace.

The Technology-Related Assistance for Individuals with Disabilities Act of 1988 was enacted to make technology assistance available to persons with disabilities through research, development grants, and operation of an information and referral network.

The Voting Accessibility for the Elderly and Handicapped Act of 1985 was enacted "to improve access for handicapped and elderly individuals to registration facilities and to polling places for Federal elections." The law requires that, after each election, states must report to the Federal Election Committee (FEC) on the number of their accessible and inaccessible polling places and the reasons for inaccessibility. The FEC compiles and sends the information to Congress for review.

The New York State Experience

New York State has been committed for many years to helping its citizens with disabilities lead productive, useful, and satisfying lives. Many aspects of New York's educational program for children with disabilities, for example, equal or exceed Federal mandates.

The Office of Vocational and Educational Services for Individuals with Disabilities (VESID) is the designated New York State vocational rehabilitation unit for persons with disabilities other than the legally blind. Last year, VESID provided vocational rehabilitation services to more than 79,000 people, including:

- 9,031 people completed service plans and were placed in jobs;
- 62 percent of the total served had severe disabilities;
- 69 percent of those rehabilitated became competitively employed; and,
- 16,290 school-referred youth were directly assisted in planning for the transition from school to work or postsecondary education.

VESID services assist people with disabilities in preparing for, finding, and adjusting to work. To be eligible for services, individuals must have a physical or mental disability that impedes their ability to work. There must also be a reasonable expectation that, if assisted, a person will become employable.

VESID works with people with disabilities to assist their entry into the job market by providing an array of services to meet unique needs. Throughout the vocational rehabilitation process, consumers work with professional counselors to choose, develop, and complete plans for employment. Services may include medical and vocational evaluation, educational and vocational counseling and programs, job training and placement, job follow-up, and other activities to support rehabilitation objectives.

VESID, as one of the major offices of the State Education Department (SED), is closely linked with the other educational and cultural programs that can benefit people with disabilities, from elementary through postsecondary levels. Coordination among them, as well as other New York State departments, is a VESID priority.

In addition to providing vocational rehabilitation services, VESID also administers services to persons with severe disabilities who may be unable to achieve a vocational objective through a network of 35 independent living centers across the State. The centers are community-based, consumer-controlled, nonresidential, advocacy organizations that help people with disabilities live more independently in their communities. Also, the Readers Aid Program, under VESID's auspices, provides readers to postsecondary students who are deaf, blind, or visually impaired.

Just as American business and labor are responding to a changing global economy and work force, the vocational rehabilitation system is evolving so that persons with disabilities can meet employer needs in the future. We are working closely with business and industry leaders to match training activities to business recruitment needs and thus provide skilled employees.

VESID is also on the cutting edge of advances in technology that allow persons with disabilities more independence. VESID is a key force in coordinating available technology with other State offices and consumer groups. VESID works with rehabilitation technology-related industries so equipment that is developed or modified meets the needs of individuals with disabilities.

All of these efforts are reflected in VESID's mission statement, which guides services and program administration. This mission emphasizes VESID's role in developing and coordinating lifelong education services so that people with disabilities can lead self-sufficient, self-directed lives.

Linking Vocational and Educational Services

VESID is working toward linking services for people with disabilities to other parts of the education system, including schools, colleges, libraries, museums, and adult education programs. This approach allows all programs and agencies providing services to coordinate operations and enhance accessibility for everyone, regardless of age or disability. It also allows vocational rehabilitation to be more closely linked to education programs that adults with disabilities will need to make later career changes.

The New York State Board of Regents has adopted, and is implementing, a 10-point policy for linking services for people as they move from school programs into adult services. The policy includes transitional planning; vocational assessment; the role of the Committees on Special Education; education for lifelong learning; college and university programs; interagency councils; occupational education; and, coordinating mechanisms.

VESID counselors provide vocational rehabilitation services to approximately 16,000 school-referred consumers per year. Early referral to the VESID system ensures a continuum of services for youth with disabilities while they are in school. More importantly, their vocational preparation is enhanced and chances of obtaining competitive and meaningful employment are increased.

Employment: The Key to Full Success

Perhaps the ultimate issue for persons with disabilities is finding opportunities for meaningful employment in their community that match their abilities and interests. Two interrelated trends have created a strong market for their employment: 1. the growth of service industries, which now accounts for the largest percentage of American jobs; and, 2. a decreasing number of available workers to fill openings. These trends combine to offer more job opportunities for individuals with severe disabilities.

During the 1970s, there was tremendous growth in hospitality industries; i.e., restaurants, hotels, and food service. These businesses employed a significant percentage of America's post-World War II baby-boom generation. They were able to accommodate an average 200 percent turnover as the number of new companies and company properties increased rapidly.

During the 1980s, the rapid growth continued but the number of teenagers entering the work force was reduced by 14 percent. In fact, it is projected that six million fewer teenagers will have entered the work force between 1985 and 1990. The gap between the number of employees needed and the pool of potential workers will continue to widen in the future.

Meanwhile, several major industries discovered a large pool of untapped workers: people with disabilities. The hospitality, retail, finance and banking, and insurance industries now are actively looking to work with private and public vocational rehabilitation and occupational

educational programs to recruit dependable individuals with disabilities.

Greater emphasis needs to be placed on interacting with not only business and industry leaders, but also trade and labor unions. The State Education Department, through VESID, has joined with key employment leaders to develop appropriate career opportunities for people with disabilities. VESID is working to match its consumers' employment needs with the recruitment needs of the available employers. This will create an environment where employers, with VESID technical assistance, will be able to offer integrated employment options and be more aware of the needs of persons with disabilities in the community.

To significantly increase employment opportunities in New York State, VESID is developing agreements and programs with major corporations and small businesses. Four of the major initiatives this year have been with The Greater New York Automobile Dealers Association, the New York State American Federation of Labor-Congress of Industrial Organizations, Pizza Hut, and the New York State Hospitality and Tourism Association.

Efforts to increase employment opportunities must further emphasize that vocational rehabilitation services should prepare individuals for careers, not only entry level jobs. For many, the extent of their disabilities prevents pursuit of traditional career development activities while holding full- or part-time jobs. Vocational rehabilitation should continue to be involved with these individuals until they reach their maximum potential.

Integrated Employment

Until recently, persons with severe disabilities have had very limited opportunities to join the competitive work force because they need ongoing services to support such employment. In New York State, more than 18,000 persons have been employed in sheltered workshops. Many of these individuals, however, could benefit from employment in integrated community work settings if the long-term support services that might be needed to sustain them in an integrated setting were available.

Initial activities to expand programs so that persons have more opportunities to be employed at their full potential have focused on establishing integrated employment, including identifying clear roles and responsibilities of State agencies in statute. Also, discussions with providers, consumers, and State agency staff have targeted policy changes needed to enhance development of an ideal integrated employment system. Mechanisms to establish regional interagency conferences and planning targeted at improving business and industry's access to people with disabilities to meet work force needs have become active. These and other activities are designed to result in increased integrated employment opportunities for individuals with disabilities.

Included within integrated employment options is supported employment, which is directed toward people who have not been served, could not previously complete a vocational rehabilitation program because they lacked ongoing services, or were placed in sheltered day programs. It may be an attractive alternative for students with disabilities who are aging out of school programs but cannot yet compete in the labor market. Linkages already exist between rehabilitation service providers and local businesses that should foster supported employment opportunities.

Federal and State efforts continue to open more integrated employment programs to persons with long-term service needs. VESID has taken the lead in New York by joining with the State Office of Mental Retardation and Developmental Disabilities (OMRDD), Office of Mental Health (OMH) and the Commission for the Blind and Visually Handicapped (CBVH) to plan and fund these initiatives.

VESID is responsible for coordinating supported employment programs for persons with severe disabilities, including the development of new supported employment programs. VESID administers all supported employment programs that provide intensive training services, except programs for those persons who are mentally ill and are served by the Office of Mental Health.

Recent program enhancements have focused on the transfer of the intensive service supported employment contracts from OMRDD to VESID. VESID is also developing statewide policies and procedural guidelines associated with supported employment, including program quality indicators directed at enhancing the quality of programs and services. Uniform reporting and payment systems have been developed that will be used by all agencies providing supported employment services. Agreement on VESID's role in monitoring individuals placed in sheltered settings will lead to identification of those individuals who may benefit from placement in an integrated, community-based setting. In conjunction with supported employment data, information obtained will enhance planning and budget development for integrated employment options. In addition, VESID is responsible for the ongoing State-funded support services that are necessary to maintain jobs for people who are not under the authority of the OMRDD or the OMH.

The OMH and VESID are collaborating on efforts to integrate programs and services. Five regional Systems Integration Programs have been established to identify ways to improve the coordinated delivery of vocational rehabilitation and related mental health services for persons with mental illness. These initial programs will provide an opportunity for local providers to assemble and

deliver services differently and assess changes needed to improve program performance and State agency integration.

These activities will lead to a coordinated interagency system for supported employment across the State and should result in about 3,000 people being placed in such services during the 1991-92 State fiscal year. In keeping with VESID's objectives to provide integrated, community-based employment opportunities, the program will be one of the major options for people with severe disabilities who have had limited opportunities in the past.

Interagency Coordination

The coordination of services among agencies is critical to improving access to vocational training and employment opportunities for individuals with disabilities. The requirements of the plethora of Federal and state laws that affect people with disabilities must be closely coordinated to eliminate duplication and inconsistencies. The goal of overall coordination among agencies is to integrate Federal, state, and private services and promote the full and independent participation of all people with disabilities in our society, regardless of age or disability.

In New York State, one of the major priorities of VESID is to work with other State, Federal, and voluntary agencies to provide effective services. A primary means for accomplishing this was creation of the State Interagency Council for Vocational Rehabilitation and Related Services by the Governor and the Board of Regents to coordinate services among the major State agencies.

The Council issued a preliminary report in January 1990 that focused on improving access to vocational rehabilitation and related services through a streamlined, better coordinated eligibility and intake process. These recommendations were supported by the Governor and Regents. During the past year, the Council focused on immediate and long-term service recommendations concerning the intake and referral process, integrated supported employment programs and cross-agency training.

Recommendations for the intake and referral process include the development of functional criteria to facilitate appropriate referrals, updating and refining State agency manuals and practices, and reciprocal acceptance of disability determinations wherever possible. Implementation of a State interagency referral form for vocational rehabilitation services and related training has begun. Functional criteria have been adopted by VESID and the State's Division of Substance Abuse Services and the Division of Alcoholism and Alcohol Abuse. Similar efforts are under way with the State Office of Mental Health.

Cross-systems training activities are being developed to enhance the awareness of services provided by each State agency and to collect and disseminate information on training activities related to vocational rehabilitation. A Directory of Agency Services, highlighting available services and access information, has also been completed.

In addition to Council activities, VESID has continued involvement with individual agencies. Such interaction creates a better understanding of VESID programs and services, improves access to resources available through other agencies, and helps VESID staff better meet consumer needs.

Interagency coordination is implemented at the local level by VESID district office staff members representing the agency on various community boards and committees, including independent living services boards, mentoring programs for young adults with disabilities, Community Services Boards, Private Industry Councils, aging-out task forces in schools, placement consortiums, advocacy groups, and professional organizations. The central office provides technical assistance to district offices to implement statewide agreements and assist with local interagency issues.

Improving Access to Services

All individuals must have opportunities to learn about and gain access to vocational rehabilitation services. However, some systems, policies, and procedures of the vocational rehabilitation process have effectively limited such access.

During the past year, VESID has implemented a plan to improve access to its services. The plan seeks to provide timely services in the most integrated setting possible while involving the consumer in all decisions and actions. The plan was designed to achieve three major objectives:

- *Timeliness* - Consumers shall receive needed services as quickly as possible.
- *Simplicity and Clarity* - Service delivery shall involve only the steps necessary to achieve the goals established for each consumer. VESID policies and procedures will be readily accessible and comprehensible.
- *Quality* - The services delivered to each consumer shall be of highest quality. VESID staff will be trained and prepared to provide "state-of-the-art" expertise in their field.

As a result of these and other management improvements, the number of persons applying to VESID increased by 11.4 percent last Federal fiscal year, while the total national program experienced only a 1.0 percent increase for the same period. The number of persons determined eligible by VESID for vocational rehabilitation services increased by 14.5 percent, compared with a 0.5 percent decrease in the national acceptance of people for services.

Federal Funding Improvements

The current Federal funding formula, based on a squaring of per capita income and population trends, does not account for the level of need of persons with disabilities. The formula effectively penalizes states such as New York that have a high average income or do not have a growing population, but may have more prospective consumers. As needs for rehabilitation services change and expand, the Federal funding formula must be revised to equitably meet demand. This must include full support for necessary innovations such as supported employment and rehabilitation engineering.

Funding must be sufficient to sustain current efforts and expand them as necessary to meet identified needs. State resources already are too scarce to be further stretched by increasing the states' share of rehabilitation costs. Federal support must not be merely maintained, but increased to provide adequate services as new populations have been deemed either eligible for vocational rehabilitation services or targeted for priority in the planning of service delivery. These populations include persons who are learning disabled or have traumatic brain injuries and autism.

The rapid increase in the number of people affected by AIDS and recent directives by the Rehabilitation Services Administration (RSA) regarding their eligibility for vocational rehabilitation services create a major planning issue for Congress and RSA. Policy decisions must address how the costs of the medical needs of this population will be met and to what extent state rehabilitation agencies will be expected to contribute to the high cost of prescription drugs or medical services, if they are part of an Individualized Written Rehabilitation Program.

Summary

During the past year, the New York State Education Department and the Board of Regents have made significant strides in implementing necessary changes for determining how services to persons with disabilities should be provided. It has become clear that an even stronger partnership with the Federal government must be forged to implement the needed changes. States need maximum flexibility and more equitable and increased funding to meet the multiple and varied needs of persons with disabilities.

While increased funding is basic for providing comprehensive rehabilitative services, it must be coupled with consistent and flexible standards across all the involved Federal agencies that encourage consumer-centered, innovative, and effective practices. To achieve this end, we need to improve Federal intradepartmental communication and planning and strengthen the working relationship with the states.

As Congress goes through the process of reauthorizing the Rehabilitation Act, the Regents recommend the following changes based on VESID's renewed commitment to help people with disabilities meet their full potential.

Recommendations

1. In reauthorizing the Rehabilitation Act, Congress should generally update wording to reflect the emphasis on consumers' needs and abilities and rename it the "Vocational Rehabilitation and Related Services Act." This would more accurately reflect its expanded scope in promoting independence, postsecondary opportunity, and integrated employment for people with disabilities. Throughout the Act, terminology should be updated. Outmoded phrases such as "client" and "individuals with handicaps" should be changed. In the Act's declaration of purpose, the reference to gainful employment should not include the phrase, "to the extent of their capabilities," since it implies a limitation.

2. The Act should place greater emphasis on Federal and state interagency activities and cooperation, including joint development of state plans wherever appropriate. To link program plans within states, at a minimum the Act must allow for synchronization of the state plan for vocational rehabilitation with the state plan for special education. Each state's vocational rehabilitation agency should have the authority to use the eligibility standards of other state agencies to maximize interagency cooperation and avoid duplication of efforts.

3. Access to adult, continuing, and higher education should be a priority of the Act as part of the overall effort to increase job and career opportunities for persons with disabilities throughout their lives.

4. Active participation of business, industry, and labor leaders should be required in national and state advisory processes.

5. The Projects with Industry Program should be expanded to allow agreements with labor and trade unions as well as individual employers and the designated state unit.

6. The Act should promote the concept that long-range vocational goals for individuals with disabilities should be targeted at careers rather than jobs, whenever possible.

7. The Act's definition of employment should include a provision that persons with disabilities be placed in an integrated setting to the greatest extent possible.

8. A comprehensive review of all Federal legislation that authorizes services to, or protects the rights of, individuals with disabilities should be undertaken to identify and eliminate requirements that are contradictory, unclear, insufficiently comprehensive, or redundant. All Federal employment and training programs, as well as other human service programs, should be authorized to

stimulate employment for persons with disabilities in the most integrated setting that is appropriate.

9. To encourage interagency coordination of services for people with disabilities, the Act should encourage the referral of persons determined ineligible for vocational rehabilitation services to other appropriate programs.

10. The information required to determine eligibility should be limited to that which is absolutely necessary and vocational. The Act should require reliance on existing documentation and other evidence rather than on purchase of new diagnostic information that duplicates existing reports. Certain definitions should be changed. "Evaluation of rehabilitation potential" should be rephrased "evaluation of rehabilitation needs," and greater reliance given to an individual's statement of needs and personal preference. Duplication or unnecessary evaluations should be eliminated.

11. Certain changes should be made in the Federal funding formula. That part of Section 8 dealing with allotment percentage should be eliminated. Beginning with the 1995-96 fiscal year, the maintenance of effort requirement should be based upon the average annual expenditure for the preceding three years, and should not be based on the 1986 expenditure level.

12. The Federal share of the cost of vocational rehabilitation services should be restored and maintained at sufficient levels to support innovations and program expansion that are necessary as new populations and program needs are identified.

13. State directors should be authorized to designate a disability as severe rather than have such designations depend upon the wording of the law. This would allow states to better respond to regional needs of people in the state.

14. There should be a newly defined term of "successful outcome," which would recognize that goals other than employment, such as documentable training or independent living goals, are appropriate and valid.

15. Services under the Act should not have to await a determination of eligibility for comparable services and benefits as is currently the case, if it can be determined that there will be a likely loss of a job opportunity.

16. Review of extended employment in rehabilitation facilities, including workshops, should occur annually instead of periodically, as is currently required. Such a review should consider the needs of each person for employment in an integrated work setting. Maximum efforts to gain such employment, including the provision of vocational and other services, should be required.

17. Individualized Written Rehabilitation Programs should be described as cooperatively developed rather than jointly developed by the individual and his or her counselor; should be based on an assessment rather than a determination; and should focus on the goals of integrated employment and independent living. Services should be provided in integrated work settings and in the individual's native language or mode of communication. Any revision to a plan should be incorporated and affixed to the original plan. The program should be developed within a reasonable time after the assessment is completed.

18. Rehabilitation engineering should be retitled as assistive technology to be consistent with the Technology-Related Assistance for Individuals with Disabilities Act of 1988.

19. Hearing officer training should be required and should be conducted by the state agency and the client assistance program.

20. The requirement that recipients of grants recruit and train persons with disabilities should be expanded to require that those hired and trained be reflective of the state's diverse population. Grant recipients should train staff on the Rehabilitation Act as well as on other major provisions relating to persons with disabilities.

21. Supported employment services should be specified in an Individualized Written Rehabilitation Program. Postemployment services should be available to persons after they have received extended supported employment services if such services are necessary to maintain employment.

22. Independent living services should be available to all persons with severe disabilities regardless of their employment potential and should be offered as a priority to students making the transition from school to work.

V. TRANSITION TO WORK: APPRENTICESHIP

We have reached a point in history when social and economic trends are converging to create a national crisis in the transition of many young people to the work place. Our youngsters participate in a national education system that emphasizes college preparation at the expense of education and training for a vocation. This occurs despite evidence that both academic and vocational preparation are needed. These factors combine with changing industrial and business needs to leave us with a shortage of adequately qualified workers.

To alleviate this situation, we must begin to rethink the structure of our learning process. The recently enacted Oregon Educational Act for the 21st Century and changes discussed in New York State are examples of the type of effort required to effect lasting change.

The basic thrust of each state's activities would give a broad base of English, mathematics, science, and social studies instruction in the first and second high school years. At the end of this period, students would receive Certificates of Initial Mastery confirming their proficiency in the basic subjects. At the start of the junior year, students would choose a career path leading to a Certificate of Advanced Mastery in either a college preparatory course of instruction or a combination of work and study targeted to direct entry to the workplace. The student also would have the option of switching between the paths according to personal circumstances.

As alluded to before, we have designed our nation's education system to prepare students for college. There has been less attention to those in the nonacademic path. That sector needs strengthening if efforts like Oregon's and New York's are to succeed.

One way to combat the problem is through a comprehensive system of support for apprenticeships, to be driven federally and made available in all states. In the section on "Transition to Work: Full Access to Services for People with Disabilities," we talk about facilitating access to work for people with disabilities. This discussion on apprenticeships can be seen as its companion and another piece in the mosaic of services that is needed to help people enter and stay in the national work force.

The Plight of the Noncollege Student

In 1988, the William T. Grant Foundation Commission on Work, Family and Citizenship released a report, *The Forgotten Half: Pathways to Success for America's Youth and Young Families*. It was a two-year study of 16- to 24-year-olds and clearly illustrated that "as young Americans navigate the passage from youth to adulthood, far too many flounder and ultimately fail in their efforts." Many are part of the "forgotten half," the 20 million youth who leave school and do not pursue college studies.

The Grant study and other reports have emphasized the unbalanced nature of our current education and economic systems. The "forgotten half" are victims of a society that places ultimate value on obtaining a college education when only about a quarter of our students exiting high school end up with a postsecondary degree. The education system in this country simply does not provide an adequate noncollege preparatory process through which students may enter a trade, skilled profession, or nonskilled job.

Alternatively, jobs are becoming increasingly skill oriented and cannot be filled fast enough with qualified people. There is a pressing national need to do something now to meet economic needs of the coming years as fewer experienced workers are available to meet the demands of industry and business. We believe that a more coherent, stronger national apprenticeship program may be one way to answer the problem. While apprenticeship programs exist in many states, they do not really fit into a coherent plan for youth to improve education nationally.

Apprenticeship means the combination of on-the-job experience and training at salaries approaching journeyman level and relevant classroom instruction. The pur-

pose is to introduce participants to practical and theoretical aspects of a skilled occupation so they can assume journeyman status upon completion of the program.

In his study, *Apprenticeship for Adulthood*, which looks at the transition from youth to adulthood in the United States and West Germany, Stephen F. Hamilton talks about the weak links between school and work in our country that obscure young peoples' perceptions of the impact current behavior has on their future. Poverty and discrimination exacerbate the problem because youth cannot relate hard work in schools to a secure working future.

In the United States, we do an admirable job of socializing and educating those who do well in school. Our best high schools are excellent and our universities are arguably the best in the world. But the majority of students who are not in the top echelon are left to drift from menial job to menial job when they first start to work. This occurs despite the obvious needs of business and industry for people with skills in particular trades who can immediately go to work and perform competently.

Apprenticeship - Past and Present

Contrary to some beliefs, apprenticeship is alive and well in this country, albeit not to the extent that we might want or need to secure maximum economic competitiveness. Apprenticeship has had a long history of steady achievements.

In the early days of our nation, apprenticeship was a primary avenue for training young people in many types of tasks. It still is an effective means in many countries for preparing craft workers. As our economy evolved to an industrial base with specialized job assignments and division of labor, the impetus for apprenticeships was lessened.

In the 1920s, however, a concerted effort was made by many employee associations, employers, and others to create a coherent national apprenticeship system. This effort resulted in the creation of the Federal Committee on Apprentice Training (now the Federal Commission on Apprenticeship) in 1934 under the aegis of the Secretary of Labor to advise the Secretary on activities that could improve and expand apprenticeship opportunities.

In 1937, the National Apprenticeship Act, more familiarly called the Fitzgerald Act, was enacted to "promote the furtherance of labor standards necessary to safeguard the welfare of apprentices...to bring together employees and labor for the formulation of programs of apprenticeship, to cooperate with State agencies engaged in the formulation and promotion of standards of apprenticeship..." The Federal Committee was expanded to include equal representation from business and labor and from the U.S. Department of Education. The Fitzgerald Act also created the Apprentice-Training Service (now the Bureau of Apprenticeship and Training) as the Labor Department unit charged with the Act's implementation.

Subsequently, Federal labor standards have been promulgated for the registration of apprenticeship programs as have regulations on equal employment opportunities in apprenticeship and training. This is not to say that apprenticeship has had an unflawed evolution to its current healthy, but limited, status. However, early problems with apprenticeship programs, such as the transformation of some master-apprentice relationships into indentured servitude, appear to have stemmed largely from a lack of strong Federal or state oversight of programs. These problems appear to have been overcome in more recent years. Now the main problems seem to be the lack of interest by business and industry and labor, attitudes that must be overcome with a boost from the Congress and Federal authorities.

Current Programs

The Federal Bureau of Apprenticeship and Training (BAT) continues to serve existing apprenticeship programs and provides technical assistance to people seeking to establish programs. It cooperates with state apprenticeship councils and other major agents to support local, state, and national apprenticeship activities. Some of the technical assistance provided by BAT includes analysis for training content and job development; development of selection and administrative procedures consistent with applicable laws; development of instruction curriculum; and other activities related to setting up and running efficient, effective programs. BAT maintains offices in all 50 states along with 10 regional offices.

BAT also widely disseminates information on the operations of successful programs. It, or a state agency, registers apprenticeship programs that meet acceptable basic standards.

There now are over 800 apprenticeable occupations in the United States recognized by national and state agencies. They range from bakers and boilermakers to toolmakers and welders, with frequent new additions as technologies and job requirements evolve. As of 1989, there were apprenticeship agencies in 29 states, Puerto Rico, the District of Columbia, and the Virgin Islands.

In New York State, for example, there are approximately 300 apprentice trades. State Labor Law authorizes creation of local and State Joint Apprenticeship Committees in any trade or group of trades. The Committees then may test, select, and enroll apprentices and register them with the State Department of Labor. Other apprenticeship programs exist under supervision of individual employees or groups of employees. Apprentice training varies greatly in size and scope statewide. Programs registered with the Department must meet standards set by the Labor Commissioner.

In 1972, the Department of Labor, in cooperation with the labor, industry, and education communities, established an associate's degree plan for apprentices in registered programs. It helps apprentices complete training, receive craft worker credentials, and earn degrees from accredited two-year colleges.

Problems/Shortcomings

The true scope of existing apprenticeship activities is illustrated in a recent U.S. Department of Labor 1990 fact sheet that notes that 230,000 persons registered as apprentices. However, 230,000 out of 20 million people who don't attend college is minimal and clearly shows a need to address the problem of helping youth make the transition from school to work. At least in New York State, this also appears to be an older group, with an average age of 29 for people enrolled in union apprentice programs.

The purpose of a coherent, comprehensive apprenticeship program should be a good mix of training for an occupation and general preparation for work. It should have flexible entry points so that a highly mobile, changeable population such as ours can decide to enter an apprentice program at any time in life. There also must be competency-based certification, not just evaluation or program termination based on "time served."

The U.S. size, diversity, and independent spirit mitigate against a thoroughly integrated national system of apprenticeship. Such a system should emanate from the many offerings at the state and local levels to offer diversity in program offerings and experimentation to meet the needs of a varied population.

An Answer

Near the end of the first session of the 102nd Congress, Senator Sam Nunn (D-GA) and Representative Dave McCurdy (D-OK) reintroduced bills (S. 2059 and H.R. 3998) in their respective houses to create youth apprentice demonstration programs. The authors' aim is to bridge the growing gap in skills, income, and opportunity between college and noncollege bound youth and to establish a systematic transition for students from school to work. They seek to do this by developing and evaluating a range of youth apprenticeship programs, primarily with partnerships between secondary schools and employers but with two programs involving students in postsecondary education technical institutes.

The Nunn and McCurdy Youth Apprenticeship Act would establish an Institute for Youth Apprenticeship to administer demonstration program site partnerships among business, education, and labor. The independent public/private institute would be managed by a board of directors composed of people representing education, labor, employers, trade associations, and the government. Working directly with the local partnerships, it would develop competency standards and certification criteria; sponsor research and program development relating to apprenticeship issues; and serve as a national clearinghouse for information on apprenticeship.

Upon completion of the five-year demonstration programs, the Institute would make policy recommendations on establishing a more permanent nationwide Youth Apprenticeship Program. The final report would address program effectiveness using such criteria as student preparedness for the technical workplace, corporate advantage, and the ability of the programs to increase the overall competency and competitiveness of the work force.

Prospective program participants would sign contracts with employers starting in 10th grade. Their apprenticeship then would last for three years. The first two years would combine high school courses with work-site training. The third year would focus on on-the-job training supplemented by academic courses at technical institutes. The postsecondary programs would allow current workers to further develop their academic skills in classrooms and provide on-the-job training on modern machinery for those already enrolled in technical institutes.

In the 101st Congress, Senator Donald W. Riegle Jr. (D-MI) and Representative James L. Oberstar (D-MN) introduced the Apprenticeship Improvement Act. The Act would have strengthened the BAT. Among other objectives, it would have ensured a minimal level of funding for the Bureau's operations; prevented reductions in its staffing level; and funded efforts to increase outreach services to women, minorities, and disadvantaged persons.

Prognosis

We need to do something to improve the lot of the noncollege student. We must strengthen the system by which the connection is made from school to vocation, both to help the student and to reinvigorate our national economy. While the Federal government is unlikely to fund a federally operated, national apprenticeship program, it can provide leadership and a critical mass of dollars to investigate the potential of apprenticeship. At the same time, we must take advantage of those projects that are operating successfully at state and local government levels. They must be supported and not hindered in their effective operations. The Nunn-McCurdy bill or a similar proposal appears to be an appropriate vehicle for this task.

Some of the concerns we have about apprenticeships may be somewhat assuaged through the efforts of the recently established Department of Labor Office of Work-Based Learning, which was created to support pilot apprenticeship projects. Also a committee of twenty-five people from labor, government, and industry has been

established to advise the Secretary of Labor on ways to improve apprenticeship training.

Recommendations

1. The Nunn-McCurdy bill or a similar measure should be passed in the second session of the 102nd Congress. To conform to the intent of the Oregon and New York activities, we believe that the apprenticeship contracts should be signed near the start of the junior year and allow students flexibility to switch to the college path if need be.

2. Any possible legislation requires the active cooperation and participation of business, labor, and educators, who, in turn, must recognize the problems facing our nonacademic students and be willing to compromise to meet their best interests.

3. Resulting programs must be designed to maximize participation in apprenticeships of women, minorities, people with disabilities, and others who are disadvantaged economically or socially.

4. While the focus of any Act should be on the noncollege student, we should not lose sight of the many apprenticeship programs operated successfully by postsecondary institutions, which might serve as models for other projects.

5. We need more publicity and better outreach to inform about apprenticeship opportunities, especially in areas with high dropout and low literacy rates.

6. Participating programs must be competency-based. The limitation of the Nunn-McCurdy proposal to a three-year term seems to contradict this notion. Some people may need less time and others more.

VI. EDUCATION FOR A NEW CENTURY, A NEW ERA

As we approach the 21st Century, we must act with energetic foresight to discard unproductive ways and retool our educational system to adapt to the profound changes in our society and economy. Federal, state, and local governments as well as parents, business, industry, and labor leaders and interested citizens must be much more active partners in achieving these goals.

Both the President and Congress have taken steps to put education at the top of the national domestic policy agenda. Three examples of their efforts include:

- the President's America 2000 strategy, based on a set of goals similar to those driving state reforms like New York State's New Compact for Learning;
- the President's legislative proposals to implement the America 2000 strategy (in a manner quite unlike New York's efforts to implement education reform); and
- Senate and House proposals for a Neighborhood Schools Improvement Act to establish a nationwide education planning process and block grant for school improvement activities, to provide much needed Federal support.

We credit the President for giving education a higher national priority. It is certainly time to go beyond the long-standing Federal role in education that has given us such successful programs as Head Start and Chapter 1. As many states and localities are working toward school reform at the same time that the Federal government is seeking solutions, all efforts can and should be coordinated for maximum impact.

In the following discussion, we will respond to each of the above initiatives and lay out the reasons why we believe the Senate proposal best advances the commonly held goals of the America 2000 agenda and New York State's New Compact for Learning. The President's legislative package would create numerous, inadequately funded programs, some of which violate states' constitutional and legal structures.

A New Compact for Learning

New York is one of many states that have begun education reforms. In 1984, the Board of Regents adopted the Regents Action Plan, a comprehensive strategy for raising standards and improving public elementary, middle, and secondary school results. Last year, the Board approved a follow-up initiative, the New Compact for Learning.

The New Compact is based on the premise that all children can learn. It is a bold challenge to transform New York State's approach into a system that provides state standards, goals, and support but encourages and promotes local initiative and response to statewide goals. It fosters active participation and innovation by educators, parents, business, industry, labor, and other community groups that is necessary for educational success. The Compact provides for the constructive flexibility necessary to make schools responsive to present and future challenges while making accountability for results more meaningful and achievable.

Even though we question some aspects of the America 2000 strategy, it and the New Compact have similar directions. Both recognize the need to improve education in America; both focus on community responsibility, collaboration, and results. Some examples follow.

Similar Goals. The America 2000 strategy and the New Compact's basic objectives establish similar goals: school readiness, proficiency in core subjects, 90 percent high school graduation rate, and acquisition of the knowledge, skills, and attitudes needed for effective participation in a global economy.

Further, Federal calls for community involvement are consistent with the New Compact's emphasis on collaborative efforts in all New York communities. Increasingly we realize that if children are to learn and develop effectively, parents must participate in the educational process (and be given the opportunity to do so) as must community and cultural groups, higher education institutions,

social service and health agencies, businesses, and industries. Also, students must become more responsible for their own educational progress.

While the New Compact and America 2000 emphasize results, promote local initiative, and seek to empower people at all levels of the system, the political focus in America 2000 should be deemphasized.

Commitment to Excellence. America 2000 promotes excellence by calling for world class standards in English, mathematics, science, history, and geography. It further commits to "first place" in mathematics and science for our nation's students. The standards set for these subjects are to be measured by American achievement tests, which are to be used by colleges, universities, and employers as a comparative standard for formal education and as the basis for national awards. We question whether these goals are achievable within the next eight years.

The New Compact for Learning also establishes standards of excellence and lays out a program of educational assessment that is achievable within a short time-frame for all schools. Such a program will be implemented through the cooperative efforts of educators and parents, business, industry, and labor and the public.

Regulatory Flexibility. Both America 2000 and the New Compact focus on the school building as the center of reform. Both support empowerment of school districts and local communities to improve schools in the context of rigorous educational standards.

The Regents strongly support efforts to remove Federal constraints that impede the ability of state and local education agencies to spend education resources most effectively to raise achievement levels. Meanwhile, they are working to remove State constraints that similarly limit initiative.

Participation in Decision Making. Participative decision making is imperative for school reform in the next decade. Through the New Compact, the Regents seek ways to increase and augment how teachers, parents, and the entire community may inspire change toward excellence in their schools.

Parental choice is also part of the New Compact. It differs from America 2000 by focusing on choice within a system of public schools, not public and private schools. The Regents believe parental choice should encourage initiatives to restructure, redesign, and, if necessary, replace public schools that are not accomplishing their mission. To implement a successful choice design, the goal must be better educational outcomes for all students.

Early Childhood. The Regents are committed to developing programs that help parents raise and educate their children and help school districts and public libraries respond to the diverse needs of the families they serve. Both the New Compact and America 2000 assert that children must enter school prepared to learn.

The Federal government has long recognized the importance of creating educational opportunities early in a child's development to prepare them for school and to learn and has implemented them successfully. We need extensions of these strategies to serve more children.

Head Start, Library Services and Construction Act programs for parents and children, and the new Even Start program demonstrate the sort of action needed in this area. In particular, Even Start addresses the need for early childhood education, including the need for nurturing children in preparation for formal education. Also, Even Start promotes family literacy and assists parents in acquiring skills needed to function effectively in society.

The Administration's America 2000 Legislation

To translate the America 2000 vision into action, the Administration has proposed legislation that differs from New York's New Compact and other state reform efforts. Neither the House nor Senate is using the President's proposals as a vehicle for creating a school reform program. It is important to note two fundamental concerns about the President's position, where the divergence from New York's New Compact is most apparent:

- Methods for implementing the President's proposals would violate states' constitutional and legal structures. For example, in a recent letter to the Senate Committee on Labor and Human Resources, the Secretary of Education proposed that a governor, with the guidance of "an education reform body separate from (but including) the State educational agency" would run the Federal education reform program in each state. In New York and many other states, the state board of education is constitutionally and/or statutorily established to formulate and implement education policy; and
- Funds flowing to localities would be available to a range of agencies that do not have constitutional or legal responsibility for the education of children.

Neighborhood Schools Improvement Act

Many of the reforms in the Senate and House bills complement New York's New Compact. Basically, both encourage statewide changes in education through cooperative reform efforts at all levels but leave implementation to localities.

We believe that the proposed Federal legislation with the most potential for significant national contribution to

ongoing state reform programs is the Senate version of the Neighborhood Schools Improvement Act. While the Senate and House bills are similar, we believe that the Senate bill provides a better structure for implementing Federal education reform.

Each bill promotes systemic change, reform, and evaluation, with community participation, rather than the piecemeal approach of the last 15 years. Each authorizes the Secretary of Education to make grants (based on the Chapter 1 formula) to state education agencies (SEAs) to develop, implement, and evaluate statewide reform plans. While neither bill provides sufficient money to make significant inroads into solving our educational problems, each sets up a block grant system that is more flexible and feasible than the President's proposals.

The Senate bill would create a Neighborhood Schools Improvement Task Force appointed by the SEA to include the governor, state legislators, representatives of the SEA, local education agencies (LEAs), the business community, parents, public school teachers and administrators, and college officials. This Task Force would develop a state education reform plan. (We note that last September the Board of Regents held an Education Summit with similar participation to implement our New Compact for Learning.)

The SEA would make grants to schools that have submitted applications and are nominated to receive the grants by the Task Force. Most money would go to schools with significant numbers of disadvantaged students. To receive a grant, a school would develop a comprehensive schoolwide improvement program that has been planned collaboratively by the school, LEA, parents, local business, and the community. They could then use the funds for a variety of school improvement activities.

This proposal supports the Regents focus on local school districts as those ultimately responsible for educating our youth. Federal and state governments can provide needed resources and guidance, but local school districts must implement reform. For this reason, we believe that while states should set a framework of standards and goals, localities should be allowed to decide how to achieve those goals.

We are encouraged by distribution of grants based on the Chapter 1, Part A formula under the Senate and House bills. By distributing grants this way, the Federal government is targeting resources to the particular needs of economically and educationally disadvantaged students. Both bills allow states and school districts to use grants to implement America 2000-related activities and to commit funds to reforms already in progress in schools. Many states, including New York, have reform programs in place and need supplemental resources. States and local school districts should have the option of implementing their own initiatives.

Recommendations

1. In general, the Federal role in education reform must recognize the need for substantial participation by SEAs, LEAs, public libraries, cultural institutions, and other concerned parties, especially parents. The Federal government's primary role is to assist in establishing "what" expectations exist for national outcomes and to leave to the states "how" those expectations will be achieved.

2. Major school reform needs significant financial support. The Federal government must recognize the severe fiscal shortfalls in many states and localities as a result of current economic conditions. To achieve national objectives, these governmental units must be given the resources for systemic reform.

3. The Federal government must remove statutory and regulatory constraints that impede the effective operation of education programs. Overly burdensome regulations thwart innovation and experimentation.

4. The Federal government must play a significant role in research, technical assistance, communication, networking, and related initiatives that individual states cannot undertake on their own.

5. Programs that provide direct financial support for Federal reform objectives should be strengthened and expanded. Even Start is a promising example that can have substantial impact on educational outcomes. By helping parents and children, it offers a unique way to strengthen skills simultaneously. Also, the Chapter 1 program provides substantial assistance to economically and educationally disadvantaged youth. With appropriate flexibility, these programs should be continued to ensure ongoing education reform.

6. We do not favor the new structure required in the House version (H.R. 3320) of the Neighborhood Schools Improvement Act. The Senate version (S. 2) is better legislation and could be effective if it implements education reform without disrupting or duplicating initiatives by state and local agencies. SEAs have key roles in the Act's implementation to ensure statewide application in developing curricula, ensuring equity of outcomes, and other goals. Intrusion into constitutionally and statutorily prescribed state and local jurisdictions must be avoided.

We urge that the conference version of the two bills include sufficient flexibility to accommodate school reforms in progress in many states and localities. It would be counterproductive if, to qualify for funding under this new initiative, state boards would have to backtrack, reengaging community groups across a state to repeat planning and implementation activities that may have been continuing for a considerable time.

VII. WORKING STUDENTS AND LABOR LAWS

Acquainting students with the world of work and preparing them to make the transition from school to a job are critical tasks for the secondary school, particularly in its support for students who are at risk or disabled. We must make a concerted effort to ensure the quality of the work experiences provided to youth who need them. Even before that, however, we must seek fundamental changes in laws and regulations that preclude programs that are flexible enough to meet varying needs. We now are limited by:

- Regulations governing work experience and career exploration programs for 14- and 15-year-olds. These inhibit or preclude alternative activities with potential benefit for students who are disabled or dysfunctional. Certain aspects of the United States Department of Labor (USDOL) Work Experience and Career Exploration Program (WECEP) and provisions for workers with disabilities are particular concerns.
- The lack of Federal regulations regarding the number of hours and the times that 16- and 17-year-old students can work while school is in session. The lack of standards means that many young people are more involved with work than with school and that those who work many or late hours have academic difficulties.

In this section, we will briefly review these problems and make recommendations to help solve them.

School-based Work Experience Programs

Schools provide work experience and career exploration programs for 14- and 15-year-old students to enable them to:

- Explore one or more occupational areas; identify occupationally relevant skills, the education and training required to obtain those skills, and the conditions under which work is performed; and, determine any personal interest in pursuing employment in those areas;
- Understand the connection between education and work by being able to identify skills used at work and in occupational areas of student interest that are, or can be, learned in school;
- Identify and demonstrate employability behaviors and skills and demonstrate comprehension of their importance in relation to the student's work experience and work in general; and,
- Demonstrate occupational skills that result in attainment and retention of entry-level jobs.

Schools offer such programs under the WECEP provisions of the Child Labor Regulations. In WECEP, students may be released from school to work up to 3 hours daily during and/or after school for no more than 23 hours a week. They must be given instruction related to their work and have training plans.

In addition, the Fair Labor Standards Act (FLSA) mandates that students in school-based programs must be paid minimum wage, except in certain very circumscribed situations. For example, students with disabilities can be employed at no wage if certain conditions are met, such as establishing a clear relationship with the person's school curriculum. The USDOL sets the standards for such allowances, rather than the education system, which certainly is better situated to determine the impact of the work on a student's instructional program and school performance. The FLSA goal of protecting students from exploitation is laudable but the current requirements involve too much "red tape," deterring educators from planning relevant individualized programs.

The model implied by these laws and regulations treats students as alike in their needs and, therefore, able to benefit from a single form of programming. In it, the school finds minimum-wage jobs for students, works with employers and students to develop training plans, pro-

vides related instruction, and strives to ensure adherence to work-hour rules. However, the development of more flexible programs is inhibited.

First, the model does not account for contemporary career exploration. No provision is made for students in school-based programs where they would shadow a person to find out what a job is like. There also is no apparent provision for work paying below minimum wage, and for students to rotate through several jobs in a year, spending a number of weeks in each. It also precludes participation in programs that are similar to college internships in which they may or may not be paid minimum wage.

Second, many youth who need work experience are not ready to participate in a way that makes it economically feasible for employers to pay them the minimum wage. A number of WECEP students are at risk and have been dysfunctional in a regular school setting. As such, they have not developed behaviors that make them minimally employable. Employers willing to accept these students must extend themselves far beyond what they would with someone else. Such students are not initially as productive as other workers and may not become so for some time. In addition, employers must spend considerable time supervising them so they gradually develop suitable behaviors.

Third, as mentioned, WECEP allows students to work no more than 3 hours a day or 23 hours a week when school is in session. A school that finds it more desirable to have them work for an entire week and then attend class exclusively for the following week cannot program this way. The basic USDOL philosophy of work occurring on a week-to-week schedule is not flexible enough to accommodate unique programs or individual student schedules.

Finally, in a related matter, some at-risk youth who could benefit from WECEP come from families receiving public assistance. The income of full-time students who work part-time in school-based programs is exempt in the calculation of benefits to be received by the family. But it is not exempt after six months of employment from the Gross Income Test that determines assistance eligibility. So, students may be dissuaded from WECEP participation because of its potential affect on support for their families.

Discretionary Work and the Negative Impact on Schooling

Current Federal law prevents 14- and 15-year-old students who are not in school-based work experience programs from working more than 18 hours per week and 3 hours per day, when school is in session. They also are not allowed to work in various occupations that are considered dangerous. 16- and 17-year-old students are subject only to the latter restriction.

The New York State Education Department recently studied part-time employment of high school juniors, most of whom were 16- or 17-years-old. It found significant negative effects associated with students working 25 or more hours per week. Studies done by researchers in other states have found detrimental impact on students working even fewer hours.

The New York study indicated that about one-quarter of working students spend 25 or more hours per week on the job. These youth have the poorest grades, the most absences from school, and do the least homework. They are more likely to take fewer and easier courses in order to work and are the least likely to obtain a Regents diploma. The study also found that tobacco, alcohol, and drug use was greatest among students who worked the most.

In general, the long hours worked by students do not appear related to economic need. Few contributed to family food and housing expenses. When they did contribute, the amount was small relative to total earnings in almost all cases. Most earnings are spent on entertainment, clothes, cars, and food outside the home.

In New York State and nationally, there is tremendous concern about increasing the performance of secondary school students. Increasing performance means more than improving student grades. It also requires that students become more competent by taking more mathematics, science, and foreign language courses or courses in which the fundamental disciplines underlying the subject matter are taught as well as the particular operations. The New York State and similar research clearly shows that students who work long hours are less involved with this more rigorous course work.

Recommendations

1. The ultimate goal in examining the circumstances of student workers should be a single, comprehensive set of laws and regulations that addresses the issues affecting their employment. In doing so, we must maximize flexible educational programming by permitting local educators to make decisions regarding work and students, including granting waivers for students to work for little or no pay if part of a bona fide education activity.

2. Current requirements associated with FLSA waivers for payment of subminimum wages in specified circumstances must be reduced to allow schools to do their job in planning individualized programs for students with special needs. Educators and Federal as well as state labor department personnel should be given a legislative mandate to work out the conditions under which it would be appropriate for students to receive different kinds of remuneration.

3. Career exploration needs to be more broadly defined and applied in the context of WECEP. The relevant legal and regulatory provisions should be changed to allow unpaid or minimally paid experiences that enable a stu-

dent to explore careers through shadowing, job rotation, and internships.

4. The provisions specifying the number of daily and weekly hours a WECEP student can work need to be changed to allow for greater programming flexibility. This might be done by defining the total number of hours in a semester that he or she can work. The school would then be able to tailor programs to individual need. The provision that bans work before 7 a.m. or after 7 p.m. should be retained for 14- and 15-year olds.

5. To ensure that earnings do not keep young people from participating in WECEP because of its potential effect on public assistance eligibility, we need legislation to exempt earnings in school-based programs from being included in the Gross Income Test.

6. We also urge legislation to restrict the number of hours and times that 16- and 17-year-old students can work while school is in session. They should be allowed to work no later than 10 p.m. on any day preceding a school day. Greater flexibility should be permitted when students are part of a school-based work program with criteria similar to WECEP's and are also satisfactorily meeting academic requirements set by their schools.

However, we also must be very wary of building enough flexibility into such changes to accommodate the needs of students in special situations. For example, there are an increasing number of young people who are out on their own without access to parents or guardians. These students may need a combined work and study schedule more than most.

7. Further support for the proposed legislative and regulatory changes should be provided by having the U.S. Departments of Education and Labor prepare information for parents on part-time employment for high schoolers. This should include a text and explanation of the law and suggestions on how to ensure that their children will benefit from the experience.

8. As part of their inspection visits, the USDOL should assist schools in identifying work sites that would be appropriate for students who are disabled or dysfunctional.

VIII. FEDERAL TAX INCENTIVES TO PROMOTE EDUCATION, JOB DEVELOPMENT, AND CULTURAL AWARENESS

According to the Congressional Joint Committee on Taxation, the Federal government will not receive more than $318 billion in tax revenue from individuals and corporations in fiscal year 1991 as a result of tax expenditures authorized in law for certain taxpayers. Tax expenditures are similar to direct government spending programs in that they result in a loss of funds to the United States Treasury. To recipients, however, they are more advantageous than spending programs because the benefit is received as long as the criteria set in law is met. In addition, tax expenditures are not subject to the annual appropriation process.

Tax expenditures are Federal incentives to encourage individuals and corporations to engage in certain behaviors or practices that are considered to be in the best interests of the nation and the economy. Probably the most known example is the home mortgage interest deduction, first incorporated in the tax code to encourage home ownership and currently worth $32 billion to taxpayers in annual individual deductions. Tax expenditures can take the form of deductions, credits, exclusions, preferential tax rates, or deferrals of tax liability.

The current tax code contains several tax expenditures that benefit education and cultural activities. The Regents support continuation of many of the current expenditures but also believe that additional incentives are needed to encourage more investment in those areas.

In this section, we discuss current expenditures supported by the Regents, and those we recommend for enactment.

Business-related Tax Expenditures

Employee Educational Assistance. Section 127 of the Internal Revenue Code allows employers to provide up to $5,250 per year in tax-free educational assistance to employees for undergraduate and graduate tuition, books, and fees.

This provision is the only means by which many employees can afford to combine work and school; especially new workers or those at the bottom of the career ladder who need education or training to qualify for advancement. Alternatively, employee educational assistance benefits employers by allowing for retraining or upgrading employee skills and thereby helping to enhance productivity and employee morale.

Recent studies show that employee educational benefits typically accrue to lower paid people who are most in need of assistance, and will benefit most in terms of upward mobility. U.S. Department of Education data show that 99 percent of assistance recipients earn less than $50,000 annually, and 71 percent earn less than $30,000, with the average payment between $400 and $1,000.

Although Section 127 has provided the intended incentive — encouraging partnerships between employers and employees for the latter to pursue higher education to improve job skills — it has nearly expired several times in recent years. The provision is routinely extended for only one year as a short-term, cost-saving measure, creating uncertainty for the affected parties. For the current fiscal year, the provision has been extended by Congress for only six months, through June 30, 1992, as part of a short-term extension of tax provisions adopted in the closing days of the first session of the 102nd Congress.

The Regents believe Section 127 has proven its worth. We support the efforts of Senator Moynihan and others to make the provision permanent.

We also propose that Section 127 be expanded to include employer support of high school equivalency and continuing education for employees, particularly those in blue-collar jobs. People other than supervisors, managers, and professionals are very low on the priority list for employer-supported education and training. Less than ten percent of business expenditures for training goes to this group, a situation that must be remedied to ensure our national economic viability.

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Research and Experimentation Tax Credit. A tax expenditure that indirectly benefits education is the research and experimentation credit, which also was extended by the Tax Extension Act of 1991 through June 30, 1992. First available in 1981, a 20-percent credit (over a base amount) is allowed against Federal income taxes for the amount a business spends on qualified research and development in a given year.

The credit is designed to provide business and industry with an incentive to participate in research and experimentation that may benefit both the firm and society, but that may not otherwise be investigated by the firm. Without tax support, some firms may be unwilling to invest the capital needed to conduct specific research or unable to convince outside investors to support the project.

Higher education institutions are often indirect beneficiaries of the provision when private firms contract with them to conduct the research and experimentation. The current law, however, does not allow payment of a tax credit for any research in "the social sciences, arts, or humanities," thereby excluding education, training, and related research and development.

The Regents strongly support the permanent extension of the tax credit as an effective way of promoting research and experimentation. We also believe that the definition of "qualified research" should be expanded to include education and related fields that seek to increase the learning, retention, and transfer of knowledge by at-risk individuals and the productivity of our education and training system. With the great need for research in a myriad of problem areas and the seeming willingness of business to participate in education-related activities, such a change seems critical.

Proposed Targeted Education and Training Equipment Tax Credit. In addition to expanding the research and experimentation tax credit, the Regents propose a Targeted Education and Training Equipment Tax Credit to spur business and industry investment in education and training technology to increase worker productivity.

Private industry would receive the tax credit for a portion of the costs of technology and equipment purchases that were made available for use by public schools in an approved education program, while also used for the company's own purposes. The primary benefit of such credit would be to encourage business and industry and schools or educational institutions to jointly plan and implement programs, such as workplace literacy, school-to-work transitions, and vocational training, which would serve both current and prospective employees. (For a related discussion, see the section on "Education Technology Capitalization.")

Examples of the kinds of technological investments that could be supported through tax credits include computer-aided basic skills training or vocational training that includes robotics and other high technology applications. The technology or equipment purchased by industry would have to meet several criteria before the tax credit could be awarded:

- The credit could apply only to newly purchased equipment used for a specific purpose in partnership with an educational agency or institution, not for existing inventories or for equipment that has been, or planned to be, discontinued.
- The credit would only be available for programs that directly serve at-risk students, including adult education or vocational program enrollees in a public school system or institution of higher education, in an organized education program approved by the state education agency or state accrediting body.
- The equipment could be located at the business site or in the school or institution, as long as the location is convenient and accessible to both parties.
- The program must be guaranteed to operate for at least three years after purchase of the equipment and use of the credit.

Job Development Tax Expenditures

Targeted Jobs Tax Credit (TJTC). Employers currently are allowed to claim a tax credit for qualified wages paid to individuals certified as members of various targeted groups, including low-income youths. Employers may claim a credit of 40 percent of the first $6,000 paid during the first year of employment, for employees hired for at least 90 days or 120 hours. The provision was also extended through fiscal year 1991.

The TJTC's goal is to promote private sector employment of persons from a wide range of disadvantaged groups, including cooperative education students, other youth, veterans, vocational rehabilitation referrals, persons receiving public assistance, and ex-offenders. The United States Department of Labor has reported that the credit has been used in over half of the cases by employers hiring economically disadvantaged youth. Vocational rehabilitation referrals account for only ten percent of the credits claimed.

The Regents support the TJTC because it provides employers with an incentive to hire economically disadvantaged youth and others who may not otherwise be considered as a priority for hiring. It also is a cost-effective way to enhance at-risk youth employment, rather than establishing a direct spending program.

Since the credit was first enacted in 1978, Congress has acted to tighten the requirements for its use, to avoid abuse claims and to make the program more effective for those most in need of employment services. Congress has closed loopholes, for example, to eliminate retroactive

claims and to ensure that only economically disadvantaged youth are hired in jobs where credits are used. As a result, both independent and private studies have found that the TJTC is a cost-effective mechanism to spur private sector hiring of individuals in the targeted groups. The Congressional Budget Office has found the credit to be more cost effective than other direct spending public employment programs.

The Regents urge Congress to extend permanently the provision, to provide a sense of continuity to employers who claim the credit. We also advocate enhancement of the credit for specific disadvantaged groups, such as vocational rehabilitation referrals, who have not been well served by the credit to date. Congress should expand the size of the credit temporarily for employers who hire people with disabilities. This would be a good way to expose employers to the productivity an employee with disabilities brings to the workplace.

Higher Education Tax Expenditures

College Savings Plans. As part of 1988 tax amendments, Congress enacted a new Education Savings Bond program, which became available to taxpayers for the first time in 1990. The provision allows a taxpayer or spouse (as long as the buyer is at least 24 years old) to purchase United States Series EE Savings Bonds and not pay Federal income tax on the interest earned if the bonds are used to pay for higher education for the taxpayer, spouse, or dependents.

The program is designed to provide an incentive for low- and middle-income taxpayers to begin saving for future education costs. The interest exclusion is phased out for married taxpayers with income above $90,000 and for single taxpayers above $55,000.

Although it is too early to gauge the impact of this new saving incentive, many people in the education community have urged its expansion. Education Savings Bonds are not currently available to family members who wish to help save for a nephew's or granddaughter's later education needs. In addition, middle-income taxpayers who begin saving may find they are ineligible for the interest exclusion in future years as their income grows. Congress should closely examine implementation of this program with a view toward its expansion.

President Bush also has proposed Family Savings Accounts (FSA), a federally subsidized college savings plan that is loosely modeled on the Individual Retirement Account (IRA) program. The proposal would allow married taxpayers with income under $120,000 and single taxpayers with income under $60,000 to make contributions to an FSA, with no tax imposed on the contribution or the interest earned, if the contribution is held in the account for at least seven years.

The Regents urge Congress to consider this and other incentives for savings suggested by a number of states and postsecondary institutions. As Federal funds for student aid and other postsecondary education programs fail to meet the needs of all students, Congress is obliged to look at innovative ideas, such as savings plans, to help ensure that no student is prevented from obtaining higher education for financial reasons.

Interest Deductions on Student Loans. To discourage reliance on credit spending and to promote savings, the 1986 Tax Reform Act phased out consumer tax deductions on most interest expenses, including deductions for interest on educational loans.

While the overall goals of the provision are laudable, the inclusion of student loan interest is bad public policy and runs counter to other Federal efforts to promote higher education. Student loan interest should not be included because education loans are investments in an individual and in our future national economic power, not a discretionary consumer spending item. Also, as Federal grants and other student aid have dwindled in recent years, reliance on loans has increased dramatically. Now, nearly 30 percent of all postsecondary students take out loans each year, and loans comprise 50 percent of all aid funds awarded in the United States.

Eliminating the interest deduction for loans exacerbates this increasing reliance on loans, especially for students who are independent or whose families cannot contribute financially to their education. Further increases in an already high debt burden may discourage prospective students, especially those who are economically disadvantaged, from pursuing higher education.

Finally, eliminating the interest deduction serves to discourage students from entering the higher cost education programs, such as the health professions field, where shortages of students are growing. Conversely, students graduating from degree programs with a significant debt burden may be less willing to enter lower-paying public service and teaching professions, where shortages are also acute.

The Regents encourage Congress to restore this specific interest deduction.

Taxation of Student Aid. The Tax Reform Act of 1986 changed the tax status of grants, scholarships, fellowships, and stipends. Since 1986, the portion of those awards used for expenses other than tuition and course-related expenses has been subject to Federal personal income tax.

The purchasing power of grant aid for low-income students has been declining nationwide since the early 1980s because grant amounts have not kept pace with rising costs of attendance. This erosion of purchasing power should not be compounded by Federal taxes on grant aid for nontuition expenses.

Similarly, Federal support for graduate education has been inadequate. Graduate students, whose awards are designed to cover living expenses, have been particularly hard hit by the taxes imposed on their stipends. Tax policy should not discourage graduate education at a time when the nation is facing severe shortages of personnel with advanced degrees in many academic disciplines.

The Congress should amend the tax code to permit the full value of scholarships and fellowships to be excluded from income.

Tax Expenditures for Educational and Cultural Activities

Unrelated Business Income Tax (UBIT). Since 1913, nonprofit and charitable entities have been exempted from taxation on related commercial activities. Museums and other cultural institutions have become particularly dependent on the exemption. For example, the American Museum of Natural History in New York City derived $22 million from earned income against its current $38 million operating budget. As is apparent, the original motive for the provision was to allow such organizations and institutions to further their missions and to better serve their clients.

In recent times, the exemption has become even more important to such institutions as other government assistance has been cut or eliminated. At the same time, charitable donations to the nonprofit organizations have slowed because Federal tax law changes have dampened individual and corporate incentive for giving.

Nonprofit organizations, in turn, have expanded commercial activities related to their primary function to help close the gap created by the loss of funding from other sources. The increased activity has prompted criticism from the private sector, which claims that nonprofit groups enjoy an unfair competitive advantage because of their tax exemption from certain commercial enterprises. The House Ways and Means Committee has held a series of hearings to determine legitimacy of the concerns.

While the Regents are sympathetic to the complaints of the for-profit, private sector, we believe that nonprofit, tax-exempt institutions and organizations play a vital role in our society's growth, development, education, and cultural understanding and that this tax exemption must be retained. The value of these entities to society, offering services that government and the private sector cannot or will not provide, justifies the tax treatment they receive. This is especially true in light of Federal cutbacks in direct spending programs that have occurred over the past decade.

Charitable Contributions. Postsecondary institutions, museums, libraries, and other cultural and educational organizations rely heavily on taxpayers' charitable contributions to help support the services that are not otherwise provided by governmental or private programs.

The 1986 Tax Reform Act limited incentives to make charitable contributions by eliminating the deduction on donations by taxpayers who do not itemize on their tax returns. Because the 1986 Act simplified the tax code, the number of nonitemizers using the "short form" jumped to 70 percent of taxpayers. It is estimated that 72 million nonitemizers make annual charitable donations. According to the nonprofit group, Independent Sector, these low- and middle-income taxpayers give, as a percentage of their income, nearly twice the amount of wealthy givers yet they are denied the opportunity to deduct the contributions.

In effect, the current provision discourages low- and middle-income taxpayers from contributing and makes the cost of donating greater to them than to the wealthy.

The Regents believe charitable contributions are critical to educational and cultural institutions, and the ability to deduct donations on one's taxes is an issue of fairness among taxpayers. We urge the 102nd Congress to reinstate the nonitemizer deduction.

Gifts of Appreciated Property. Another provision of the 1986 Tax Reform Act discouraged charitable donations to cultural and educational institutions to a greater extent than eliminating the nonitemizer charitable deduction. People donating gifts of appreciated property, such as a work of art that has increased in value since its original purchase, were generally subjected to an alternative minimum tax, which allowed that only the original cost of the gift may be deducted, rather than the appreciated value.

Recent studies have shown that the 1986 provision has seriously eroded the giving of such gifts to universities, museums, hospitals, and others by as much as 42 percent since before 1986. Data collected from over 1,000 higher education institutions by the Council on Aid to Education found that gifts to higher education for capital purposes, in the form of appreciated property, declined by nearly 17 percent in 1988 from prior year levels.

Congress took the first step in repealing the provision in the 1990 Budget Act, by exempting gifts of appreciated "tangible personal property" from the tax. The Regents urge the 102nd Congress to exempt all gifts of appreciated property, so that real estate and other non-"tangible personal property" may be donated to tax-exempt entities and deducted at their full market value.

Recommendations

1. Section 127 of the tax code, which facilitates employee educational assistance for undergraduate and graduate education, has proven its effectiveness and should be made a permanent part of the tax code. In addition, the Regents urge extension of the benefit to support blue-col-

lar worker participation in high school equivalency and continuing education programs.

2. There is great need in these times of education reform to do much more education research and development. The Regents urge the permanent extension of the research and experimentation tax credit, with an expanded definition of "qualified research" to include research in education, training, and related fields.

3. A Targeted Education and Training Equipment Tax Credit should be enacted to provide more incentive for business and industry to invest in education and training technology to increase worker productivity.

4. Congress should permanently extend the Targeted Jobs Tax Credit to provide a sense of continuity to employers who claim the credit and the disadvantaged and disabled people for whom it provides employment. The credit also must be refocused to try and reach groups that have been underrepresented in its coverage, especially to promote employment of people with disabilities.

5. Congress must carefully monitor implementation of the new Education Savings Bond program to gauge its impact in helping taxpayers save for future postsecondary education expenses. Due consideration also must be given to the President's Family Savings Accounts and other proposals that have this same goal.

6. Education loans are investments in an individual and in our future national economic power, not a discretionary consumer spending item. The Regents urge Congress to restore previous law by allowing student deductions for interest paid on student loans. The lack of such deduction only serves to exacerbate the increasing student reliance on loans and discourage them from entering high-cost education programs and low-paying but altruistic careers. The 102nd Congress also should amend the tax code to permit the full value of scholarships and fellowships to be excluded from income.

7. The Regents urge Congress to maintain the current Unrelated Business Income Tax exemption for nonprofit and charitable organizations engaging in related commercial activities.

8. Charitable contribution deductions should be restored for nonitemizers and those who donate any gifts of appreciated property. Current law serves as a disincentive for giving to cultural and educational institutions during a period of decreased government funding for such organizations.

IX. EDUCATION RESEARCH AND DEVELOPMENT

The Federal government has played a minimal role in education research and development (R & D) over the years. A key problem is that the Congress and Administration lack mutual trust in setting R & D priorities. The conflict is rooted in the R & D model for the U.S. Department of Education: Congress authorizes and funds the research structure through the Office for Education Research and Improvement (OERI), but only indirectly suggests research objectives. The Administration's research agenda is advocated strongly, however, often counter to congressional intent. Funding levels generally have reflected this situation, albeit with marginal improvement over the last few years.

The Regents have been steadfast in proposing an alternative research structure that might alleviate distrust while addressing the urgent need for education R & D to guide reforms occurring nationwide. We target four critical areas that can be justified as Federal responsibilities because of their scope and need for central direction: 1.a **research program** to address specific issues of national concern and to include a national education cooperative extension; 2. a coordinated, comprehensive **national knowledge base**; 3. a system of educational **assessment and evaluation**; and, 4.a firm pattern of **technology transfer** between Federal agencies and the civilian education community.

In the following discussion, we will briefly review these topics. Additionally, Representative Major R. Owens (D-NY) has introduced the Educational Research, Development, and Dissemination Excellence Act (H.R. 4014), a bill to overhaul the Federal education R & D function that is many ways similar to the Regents proposals. After the Regents proposals have been reviewed, we will summarize the Owens legislation.

National Research Program

A Major Project Approach. The distrust between the Congress and the Administration might be reduced by adopting a research structure similar to that used in other Federal agencies, where support and funding are done by major program area. That is, the Congress authorizes and provides multiyear appropriations for a Strategic Defense Initiative or AIDS research. Armed with the congressional imprimatur, the appropriate department develops and conducts a research program in that area through government laboratories and facilities, industrial contractors, higher education institutions, and nonprofit organizations. This approach significantly differs from the education R & D model.

An education major project approach would have the Department of Education, during the negotiated budget/appropriations process, propose research agendas in selected areas such as dropout prevention, early childhood education, teacher training, or education technology development. The Congress would then authorize and fund related individual research programs, which would be carried out through the structure proposed below.

Research Structure. The Department of Education and the Congress should establish and maintain a comprehensive research structure and program involving Federal, state, and local governments (with states coordinating efforts within their borders); nonprofit organizations; and, higher education institutions, including individual educators, scholars, and graduate students. A clearly defined structure would help assess need for specific research and facilitate ongoing technical assistance and nationwide dissemination of salient findings.

The structure should be linked by high-capacity telecommunications facilities for electronic mail, data and information sharing, collaborative research, and joint program development. The proposed National Research and Education Network could be a logical and effective mechanism for communication.

Advisory Councils. The first step in building this struc-

ture is to create apolitical national and state R & D advisory councils to set research goals and oversee projects. State education agencies (SEAs) would serve as council staff and help percolate research findings up and down the research chain.

Research Responsibilities. The Department of Defense divides research into four levels based on purpose and the entities best suited to complete the work. Similar categories can be used as a framework for an education research program:

1. *Basic Research*, which would define problems and result in formulation of a relevant knowledge base; e.g., investigation of the personal, physiological, psychological, and social ramifications of dropping out of school. This research must be federally based, where a centralized knowledge capability can provide wide access to relevant findings, but could be done by nonprofit organizations and/or higher education institutions.
2. *Exploratory Development*, which, continuing the dropout illustration, would use the knowledge base to develop and test alternative dropout prevention models, including research on curricula, support services, computerized and other instructional techniques, administrative structures, and testing methods. This category also would be federally focused because of the wider coordination and dissemination requirements and because outcomes would still be tentative for practical application.
3. *Advanced Development*, which would guide practical application of the most promising research findings to ensure that models are carefully and completely incorporated into a school or other institution with appropriate monitoring and evaluation. States have the centralized authority to consistently apply research models, monitor their implementation under varied conditions, provide technical assistance, evaluate outcomes, and transmit results and other pertinent information to Federal officials.

Title III of the Elementary and Secondary Education Act of 1965 established a grants program to states for supplementary educational centers and services. The purpose was to provide a locus of state funding for planning, development, and dissemination of "exemplary" programs as local models, an opportunity to support state R & D that should be pursued again.

To also help support state R & D, we propose a Federal Research and Technical Assistance Letter of Credit for them, at their discretion according to specific need, to purchase research services or technical assistance at any Federal education center or laboratory. The Letter would be similar to the commodity letter of credit used by some states in the child nutrition program.

4. *Engineering Development*, which can be characterized as "it works." A local education agency or other operating unit would be assisted to test and install models that have generated positive results. State National Diffusion Network offices would be helpful here, as would the cooperative extension service proposed next.

Cooperative Extension Activities. Tying all this together would be a national education cooperative extension service centered in the U.S. Department of Education. Cooperative associations and similar agencies have helped solve problems in many fields. Perhaps the most known example is the Cooperative Extension Service (CES) flowing from the U.S. Department of Agriculture (USDA) through land-grant colleges.

Funded cooperatively by Federal, state, and local government and administered by the land-grant colleges, with units in almost every county in the country, the CES disseminates information about advances in a number of fields; develops experiential learning opportunities; demonstrates and maintains new technologies and practices; and, trains local volunteers for leadership roles. Belying its popular, rural-oriented image, one of its most recent emphases has been on the needs of at-risk youth. This has resulted in a number of model programs in areas such as substance abuse, parenting skills, child care, and the building of self-esteem.

National Knowledge Base

The Federal Department of Education should help develop a national education knowledge base, including a comprehensive set of standardized statistics, in an electronic format (e.g., national definition and measurement of "dropout"). New York's Student Information System could provide a model for this effort. It is a comprehensive, computer-based system that includes biographical, attendance, academic, course/scheduling, program participation, instructional management, and health/medical information. Authorized teachers and administrators can use it to identify and analyze academic and attendance trends. The system's general purpose is to improve the monitoring, decision-making, and policymaking capacities of State and local officials.

While all information may not be needed nationally or for sharing among states or localities, the Federal government should:

- support states that have been developing information systems so that all school districts are included in networks;
- ensure creation of similar systems in states and territories to feed the most pertinent statistics to a central point; and,
- help identify the statistics, defining them for consistency (e.g., What is a "dropout?") and determining alternative collection procedures. The 1958 National

Defense Education Act authorized a program to improve state statistics services that should be revived on a large scale to meet today's needs.

In addition, the Omnibus Trade and Competitiveness Act of 1988 mandated the Department of Education to lead unification of the information data bases of the Educational Resources Information Center (ERIC), the Manpower and Training Research Information Service (MATRIS), the National Technical Information Service (NTIS), and others. While information clearinghouses exist for specific applications, the lack of a unified data base hampers identification and monitoring of research.

Assessment and Evaluation

The scarcity of good data on the condition and quality of education is exacerbated by the lack of a guiding Federal strategy for national and state assessment and the relative imbalance in funding for governmental statistical and research activities. Such a strategy is needed to enact a comprehensive, coordinated evaluation program starting with the individual student as a unit of analysis and proceeding through ascending levels of school, school district, state, and nation.

The U.S. Department of Education must help build an improved system of standardized assessment and evaluation. Teacher empowerment can only come when they and those who judge their work know what is happening with our students and schools.

To address some problems, the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 sought to improve the National Assessment of Educational Progress, which provides objective information about student performance to policymakers at all government levels. The new law also mandated the use of assessment sampling techniques that produce nationally, regionally, and state-representative data in reading, writing, mathematics, science, history, geography, and civics.

The Regents support the provisions because the Federal government has the centralized leadership and resources necessary for such a task, but a larger effort is needed. The U.S. Department of Education must:

- investigate current assessment practices in education and other social science fields to identify strengths, weaknesses, and generalizable characteristics. This should include evaluation of current data bases, indicators, measurement instruments, and assessment systems to gauge their capacity for accurately portraying school and student performance;
- develop an assessment strategy and model(s) that address the needs of the polity, the professional, and the parent;
- examine policy enactment instruments to determine their relative efficacy and social and economic costs in prompting effective implementation; and
- research how process variables (e.g., management structures, work procedures) are managed or manipulated to produce positive outcomes such as effective schools and teachers and socially and intellectually prepared graduates, compared to the less effective or outright failures.

In particular, more R & D is needed on predictive quantitative models to enable efficient use of educational data for decision making. This task must identify or develop the requisite models, information data bases, and testing and data collection systems. The design should facilitate the use of assessment results to formulate or change social policy; e.g., determine whether current education systems are equitable by ethnicity, origin, and gender.

Additionally, the Federal Department of Education must develop a more comprehensive method for collecting and disseminating information on innovative practices, indicators, and evaluation criteria; quantitative analysis models to aid decision making; effective methods for identifying, introducing, and evaluating assessment-based changes; and, uses of the latest assessment technology, including computer-adaptive testing. It also must help train and support states and others in giving technical assistance to implement and evaluate assessment procedures and results.

Technology Transfer

An important, but overlooked, facet of education R & D is the identification and transfer of knowledge and technology developed and implemented by other economic sectors. The Department of Defense (DOD), in particular, generates education and training software that has been adapted for civilian use and should be tapped further by education. Government agencies and education institutions must actively seek to promote technology transfer.

The Potential in Transfer. The concept of training technology transfer between the military and education is not new. During World War II, the former perfected many technologies and instructional techniques that were adopted by the latter, including the overhead projector, simulation exercises, and foreign language laboratory training programs. More current developments such as microcomputers and interactive video discs have found their way from defense to industry and education. The DOD *Report to Congress on Education and Training Technology Transfer* outlines several products that might be useful to schools.

Transfer should not be limited to hardware/software applications. The military and its contractors frequently produce reports on topics relevant to the civilian education community. The transfer of simple information such

as bibliographic citations of these reports from sector to sector has significant gaps and reflects the transfer problem. For example, the Manpower and Training Research Information Systems (MATRIS) maintains a data base of abstracts of education and social science research conducted by the DOD. The Educational Resources Information Center (ERIC) performs a similar bibliographic and abstracting service for the education community. Relevant education citations can routinely be found in one and not the other. While this situation has been improving, the need to expedite creation of a comprehensive, consolidated data base of knowledge is critical for research, evaluation, and other purposes.

The Legislative Structure for Transfer. The Regents often have recommended that a well-planned program of direct transfer replace the current "trickle down" of technology. This process must occur in a sequacious manner so it is not perceived as diverting defense funds. We should make a concerted effort to translate or adapt processes or products for schools and colleges. Federal legislation is evolving slowly in this direction, although great strides are yet to be made:

- The Stevenson-Wydler Technology Innovation Act of 1980 has encouraged exchange of scientific and technical personnel among government, industrial, and academic institutions and stimulated use of federally initiated technology by state and local governments and the private sector;
- Patent law and policy reforms have strengthened transfer possibilities by promoting private sponsorship for proprietary product development, public/private research partnerships, and the government's ability to waive patent ownership rights (through the Bayh-Dole Act of 1980);
- The Federal Technology Transfer Act of 1986 more formally promotes military-university transfer programs; and
- The 1988 Omnibus Trade and Competitiveness Act authorized an Office of Training Technology Transfer in the U.S. Department of Education as a clearinghouse for federally developed education and training knowledge and technology available for transfer to state and local education agencies, among other entities. It has yet to be funded. The Act also authorized regional technology transfer centers to be operated by a college or university, or a consortium of schools, to enhance transfer relevant to that region. Both these activities must be put into operation with an adequate appropriation.

Through these statutes, Federal agencies are required to transfer applicable technology to other sectors but the education community's involvement has been limited. The Federal government should seriously reconsider the comparative needs of the military, private industry, and education institutions and current systems for sharing training techniques, technologies, and curricula. Use of education institutions as cooperative links should be formally and definitively introduced. The training technology transfer concept, extended to include formal liaisons between the DOD and education institutions, should be mutually beneficial.

The Owens Proposal

Representative Owens is not as detailed as the Regents in proposing a research structure and process. However, his legislation would create a National Educational Research Policy and Priorities Board to plan and oversee the conduct of Federal education research and development. A key responsibility would be the recommendation of priorities for the investment of R & D funds on the next 5-, 10-, and 15-year periods. This would be done in collaboration with the National Goals Panel and include a survey and assessment process to ascertain the current state of knowledge about education and where information gaps exist.

The Board also would provide ongoing management of the R & D function to ensure its relevance and dissemination of findings to the field. An important task for the Board is to keep tabs on, and coordinate, education R & D done by all Federal departments. While not specifically noted in the bill, we hope this includes the concerns raised under our technology transfer discussion.

Representative Owens' bill also would create a District Education Agent Program, administered by a Bureau of Education Extension (BEE) created in the OERI. The BEE would implement the program through Learning Grant Institutions (LGIs) funded by competitive grants in 50 of the poorest congressional districts under the auspices of postsecondary institutions, regional education laboratories and/or centers, nonprofit education research corporations, or profit-making companies specializing in education. The BEE also would plan the programs' expansion into all congressional districts and, among other tasks:

- Support the 50 local Agents by responding to the assessed needs of each program; facilitating access to research information; coordinating interagency services by involving the appropriate institutions, organizations, and agencies in the development of training programs for parents and school board members, curricula; and providing continuing education programs for teachers and school administrators;
- Develop a dissemination delivery system to ensure the transfer of current exemplary educational models, methods, techniques, and technologies to LGIs; and
- Develop and support seminars on educational research, training programs, teleconferences, and

workshops for the congressional district operations).

Another important theme advanced by Representative Owens would put American education online with a National Education Dissemination Network to include:

- a National Education Research Library, to provide a central Federal source for education information, reference services, and resource sharing; and
- an Office of National Networks and Telecommunications, to develop an interactive electronic network to link all units of the Department of Education with one another and with libraries, schools, colleges and universities, and homes, and to any electronic online dissemination system of the U.S. Government Printing Office.

The Owens bill would create four national education research institutes to study the critical problems of education of at-risk students, school governance, early childhood education, and student achievement. In essence, the provisions would statutorily define four ongoing priorities for education R & D. This approximates the Regents call for a major project approach to R & D.

Recommendations

1. The Educational Research, Development, and Dissemination Excellence Act (H.R. 4014), introduced by Representative Major R. Owens, responds to many of the education R & D issues the Regents have raised over the years. We hope that it becomes the basis for a renewed and enhanced Federal role in R & D to ensure that we can meet the demands of a 21st Century education system. We also believe, however, that the distrust noted in our introduction to this section could best be alleviated by more specific delineation of a major project approach.

2. We have proposed that the Federal government should support development of computerized data systems in states and territories that would feed pertinent statistics to a central point. They should help identify such statistics, defining them for consistency (e.g., What is a "dropout?"), and determining alternative collection procedures. It is not clear that the Owens proposal for an interactive electronic network would do this.

3. The Congress must do more to help states purchase research services or technical assistance at Federal education laboratories or centers. We continue to support a Federal Research and Technical Assistance Letter of Credit to do so.

4. Various provisions of the Owens bill should facilitate the U.S. Department of Education's unification of the information contained in the existing data bases of the Educational Resources Information Center (ERIC), the Manpower and Training Research Information Service (MATRIS), the National Technical Information Service (NTIS), and others. This would help build a comprehensive knowledge base of education and technology and related research in one Federal agency. As noted, this effort should also be specifically designated as a means for technology transfer.

5. The Owens proposal is a little lean in defining a Federal assessment and evaluation function. In addition to providing related information collection and dissemination and training and technical assistance support, the U.S. Department of Education should head an education assessment research program to:

- investigate assessment in education and other fields to ascertain pertinent and generalizable characteristics;
- develop a strategy to examine the state of assessment, evaluating the capacity of current systems for providing an accurate portrait of school and student performance within the context of addressing polity, professional, and parent needs;
- examine policy implementation instruments for their relative efficacy and costs in prompting effective implementation; and
- research the process by which inputs are managed within a school to produce positive or negative outcomes; i.e., how inputs are combined and implemented to produce effective teachers, school buildings, districts, and intellectually and socially prepared graduates. Being able to track process is critical to test new policy interventions.

6. The Regents continue to recommend that the "trickle down" of Federal technology to the civilian sector be replaced by a well-planned program of direct transfer to adapt processes or products for schools and colleges. Federal legislation is evolving in this direction and must continue to do so. Transfer provisions in the Omnibus Trade and Competitiveness Act of 1988 must be fully implemented with an adequate appropriation.

X. INFORMATIONAL AND CULTURAL SERVICES: Archives, Public Broadcasting, Museums, and Libraries

The National Need for Information and Cultural Services

General Issues. Through history and across cultures, a major strategy to build social cohesion and civic responsibility was to provide public funding for strong cultural institutions. Among the most important of these organizations in New York State are museums, which express and interpret the history and culture of the society; libraries and archives, which provide access to society's accumulated knowledge and to the workings of government; and public radio and television, which assure educational, public affairs, and cultural programming in the public interest.

The variety and flexibility of settings and materials available through cultural institutions are suited to all learning styles and development rates. The habit of using such resources, formed through close collaboration in the school years, provides a basis for lifelong learning. These institutions play an integral part in New York State's New Compact for Learning.

Education. The public library is the first educational stop for many new immigrants and for parents beginning to educate toddlers. The first teacher, beyond parents, for children from many racial and ethnic backgrounds is television. If it is a program like **Sesame Street** then children are learning to understand and appreciate diversity even as they develop personal pride.

The New York Delegation to the White House Conference on Library and Information Services stressed the importance of increased support for services, facilities, and materials to make children ready for school and to help young people become lifelong learners and productive members of a democratic society.

Museums also can contribute to formal and informal learning from preschool days through secondary school to the continuing education of adults. Museum relationships with schools and universities have great potential as new curriculum efforts call for a strengthening of the sciences, arts, and humanities. Museums also create partnerships in their communities with other organizations that serve the public in informal settings, such as libraries, civic groups, and social service organizations.

For children and adults in isolated urban or rural areas, libraries, museums, and public broadcasting may be the only way to learn about other cultures, the world, and even their own cultures.

Access to Government Information. A basic distinction between a free democratic society and other forms of government is that the former's citizens can examine and question the workings of government. Access to records and published documents through public records repositories and depository libraries is the key to exercising this right. Attempts to limit access always threaten this right, whether through imposing charges or limiting printing or distribution.

Censorship. Censorship has always been a political issue and a cultural concern. Libraries have an obligation to provide access to published materials and to stand firmly for the right of an individual to read whatever published material is available. Museums are obliged to interpret all aspects of history and culture, even when unflattering or unpalatable to society. Public television and radio have similar responsibilities to inform and present differing perspectives.

Freedom of Expression. Free expression is a cherished right, no more deeply felt than by authors and artists. Efforts to restrict the role of libraries, museums, and public broadcasting in making the products of authors, scholars, film makers and artists available must be resisted at all levels of government. This past year has seen serious efforts by organized political action groups to impose their values through legislated censorship. The Congress must be vigilant against future censorship efforts.

Financial Support. Unless adequate support for these institutions is sustained, access may be limited or denied without the active work of censors. The Federal govern-

ment must affirm its commitment and provide adequate resources to ensure strong and relevant informational and cultural services that meet the broad range of public needs and interests, even as related institutions continue to press for state, local, and private support.

Illicit Antiquities and Stolen Art. The theft of art and traffic in illicit antiquities and art objects remains an international problem. This country should take the lead in stopping such practices by having the Federal Council on the Arts and Humanities take steps to codify and strengthen international conventions on the theft, export, or import of objects.

Archives and Records Issues. Sound archives and records management policies and procedures are needed in any organization, including government agencies, to ensure efficient internal operations, effective service delivery, and historical and cultural continuity. Archives — records with enduring value — must be identified, preserved, and accessible for research and education. The lack of funding and national leadership is posing a significant barrier, putting our nation's existing documentary heritage at risk.

A variety of Federal policies and programs influence the work of government, private, and nonprofit archives and records management agencies and, thereby, the activities of educators, researchers, and citizens. They have substantial impact on the New York State Archives and Records Administration, affecting its ability to advise, assist, and regulate 3,800 local government units, state agencies, and more than 1,500 historical records repositories, and to directly administer the State government archives. Rapid changes in information technologies require firm Federal direction.

Public Broadcasting Issues. Electronic broadcasting media are available, without charge beyond basic utility rates, in virtually every household in our country. Public broadcasting networks can be one of the most effective means for presenting educational, public interest, and cultural programming to people in urban and rural areas, from preschool children and at-risk youth to the fixed-income elderly and homebound people with disabilities.

Financial Support. The importance of sustaining the integrity of commercial-free broadcasting has never been greater, especially as it has assumed increased instructional capacity. It is threatened by insufficient Federal support. In New York, where WNET alone produces 40 percent of all public television productions, inadequate funding is particularly onerous.

Instructional Video. As urban and rural school districts experience dropout rates that portend continuing personal and social tragedy, we should use this important resource as an alternative means of instruction. Frequent use of instructional video can ameliorate the attitude of some students that school is boring, can dramatize ideas and events, and can engage those for whom learning through more traditional means is unsuccessful.

Equipment. Poor students do not have the same access to technology as their peers in other areas. Since many students are "visually oriented" learners, this lack is a real barrier to learning. Educational psychologists have known for some time that learning and retention are enhanced by addressing more than one sense in the instructional process.

Museum Issues. Museums serve as a national resource for the collection and preservation of objects, artifacts, and specimens, which they study, display, and interpret for the public. They help us all to understand and appreciate the arts, sciences, human history, and cultures that give context to our lives and the world.

Museums are a major educational *and* economic resource. For example, more than 30 million people visited New York's 1,440 museums and historical societies last year — a testimonial to the vital national resource that they represent to the State and nation. Their combined budgets exceed $200 million and they employ 15,000 people, 5,200 full-time.

In our State, hundreds of museums constitute a vital network of resources that complement schools. Museums, art centers, zoos, historical sites and societies, and botanical gardens offer vast possibilities for experimental, interactive learning. By using these resources, students gain a sense of the past, cultural and moral customs and values, and the richness and diversity of humanity, learning to understand and cope with change and to live and learn in a complex world.

Increasing Service Demands. Despite increasing costs and insufficient resources, museums are generally receiving more visitors to their exhibits, serving more students in their education programs, and facing steadily rising demands for the use of their facilities for concerts, meetings, and other educational and community activities. There is growing pressure for museums to carry on research programs, conserve collections, develop computer systems for data collection, organize more traveling exhibits, and extend services beyond museum walls. It is difficult to identify a significant museum activity that has not been strained and will not continue in strong demand.

Repatriation of Cultural Objects. Federal law requires repatriation, or return to Native American tribes, of certain cultural objects under specified conditions. The law is applicable to any museum that receives Federal funds and has control over such items. While the Federal government can appropriate funds for museums to comply with the legislation, no money was given. States need assistance to meet the new mandate.

Biological Diversity. The United States needs a biological diversity strategy to arrest an increase in extinctions of the plant and animal life in North America and elsewhere. To ensure that species will survive into the future, research into the diversity and distribution of all life forms must be supported. Recent Federal legislation (H.R. 585 and S. 58) would establish a national policy for the conservation of biological diversity and a national Center for Biological Diversity and Conservation Research at the Smithsonian Institution. The Center would serve as a focus for assembling existing but scattered data about diversity and, through competitive grants, stimulate the discovery of vital new information by researchers.

Geologic Mapping. Detailed, accurate geologic maps are vital to national security, environmental protection, and the provision of energy and raw materials needed by our industries. Maps are the principal sources of geologic information for nearly all basic and applied earth-science research and decision making and are essential to assessing mineral, energy, and water resources; screening and characterizing sites for toxic and nuclear waste disposal; planning for land-use; reducing hazards of earthquakes, volcanoes, landslides and other ground failures, and coastal and stream erosion; and siting of critical facilities. The current combined capacities of Federal, state, and academic groups to produce geologic maps cannot meet present or future needs of our nation.

Two new bills (S. 1179 and H.R. 1763) would encourage and accelerate production of these maps. The House has passed its version but the Senate has yet to report S. 1179 from committee. We believe it should do so as soon as possible so the legislation can be concluded.

Library Issues. The Federal government supports libraries because of their key role in national scholarship, research and development, productivity, and education. A New York State partnership with Federal and local agencies and organizations cooperates to deliver effective services. Regents policy requires that every resident should enjoy timely, free access to a full range of information resources provided through libraries within systems without restriction, censorship, or violation of privacy.

White House Conference on Library and Information Services. The 1991 White House Conference on Library and Information Services recommended Federal legislation and policy on services to enhance literacy, increase productivity, and strengthen democracy. Proposals consistent with Regents policies were made for a comprehensive library services program for children and parents; library participation in the emerging National Research and Education Network (NREN) and other library resource sharing mechanisms; access to government information; strengthened literacy programs; removal of barriers to services; improving research and information on economic development; and providing a full range of public, academic, special, and school services.

Networking. The hallmark of State library service is networking. Most of our 7,000 libraries are members of one of the 46 school, 23 public library, and 9 reference and research library systems that provide services to people of all ages. These systems, 11 major research libraries, and the regional medical libraries are linked to the New York State Library by telecommunications, computer, and database systems and give users access to the total resources of the statewide library network.

The Library Services and Construction Act (LSCA) assists networking and resource sharing among libraries. It should be expanded and coordinated with NREN planning and administration of related Federal activities such as Higher Education Act programs. States must help plan and manage federally aided networks.

Telecommunications Rates. Technology offers opportunities to computerize information resources sharing, improve rural library services, and solve the problem of disintegrating books, documents, and films. While libraries share resources this way, escalating costs resulting from divestiture and Federal Communications Commission decisions are threatening their ability to do so. Congress should provide preferential telecommunications rates to libraries, which depend on leased private lines to connect 650,000 library-located terminals to a few larger national, nonprofit bibliographic databases.

Telecommunications Networks. NYSERNet, SUNYNET and other special networks provide economical, rapid communication among libraries and members of the academic and research communities. School, public, community college, university, and research libraries all need access to the NREN and similar projects.

Construction. Changes in service programs and information technology are creating demands that existing library buildings cannot meet. Regents policy and the Americans with Disabilities Act affirm that all libraries be fully accessible. Increases in LSCA Title II funding could help support the modification of many facilities to make them energy efficient and remove architectural barriers to enable full access to persons with disabilities. Title II also helps libraries qualify for construction assistance under other Federal legislation.

Preservation of Research Materials. The deterioration of archival and library holdings is a national concern, and the LSCA has been expanded to support preservation activities. Also, following New York State's lead, Illinois, Maine, New Hampshire, and New Jersey have acted to encourage the systematic preservation of endangered resources. The problem, however, requires national action. Sufficient allocations must be made to the National Archives and the Library of Congress to meet their preservation needs and to help them provide nationwide technical assistance.

Federal Funding Programs for Informational and Cultural Services

National Endowment for the Humanities (NEH). Through its Office of Public Programs, the NEH supports public broadcasting production, museum exhibits, library programs, and the maintenance of collections essential to scholars and the public. Its funding is extremely modest and has not kept pace with inflation or demonstrated national need.

The NEH Office of Preservation provides leadership and grants in conservation and preservation of materials. Recent funding increases here bode well for the success of a national strategy to prevent the rapid loss of our research base through deteriorating materials. The NEH programs also include funds for establishing national standards and policies and testing technologies.

An anticipated severe shortage in college teachers in the humanities will occur within the next decade. At the same time, the number of college graduates pursuing a doctorate in history, literature, languages, philosophy, or library services has rapidly declined. A major increase in support of NEH programs can help ensure that the quality of our liberal arts institutions does not decline. Fellowships and challenge grants to allow institutions to establish endowed chairs in the humanities and similar programs are both necessary and too sparingly funded to have the needed impact.

National Endowment for the Arts (NEA). The recent controversy over fewer than 20 of the 85,000 grants awarded in the NEA's history has raised awareness nationally of the fragility and inadequacy of current support for the arts. This country provides many times less government funding for the arts than any of the other major industrial nations. According to *Art in America* (July 1990), West Germany spent $73 per person in 1989; France, $29; United Kingdom, $12; and the United States, $0.71.

This country's attention to art education is similarly backward. In Japan, for example, the arts are an integral part of every child's education from the earliest level, with a focus on the appreciation of aesthetic excellence in public and private arenas. If we lose our competitive edge because of the greater attractiveness of the design of European or Japanese goods, we may regret our lack of serious support for the arts.

For economic self-interest and improved quality of life, we must take seriously the role of the arts in fostering creativity, more attractive and livable environments, and a more civil society. The NEA's Arts In Education program deserves particular priority for helping to establish more systematic and productive arts program within schools.

National Science Foundation (NSF). The NSF supports many science research and education activities, including important projects in the New York Geological and Biological Surveys. As issues of environmental degradation, loss of biodiversity, and depletion of natural resources become more urgent, the research work of these Surveys and other similar organizations provides basic information on which to base sound public policy.

The NSF program for Public Understanding of Science in part supports museum programs aimed at motivating student interest in science and technology. Increased use of collections and interactive exhibits to stimulate excitement and sustained exploration of science is an effective and accessible way to give direct contact with the natural world and to demonstrate scientific principles. The New Compact for Learning encourages integration of these museum resources into curricula, an effort that requires programs responsive to student needs. NSF programs should be fully supported to help in this effort, even in difficult fiscal times.

National Historical Publications and Records Commission (NHPRC). This Commission, chaired by the Archivist of the United States, provides vital leadership and modest financial aid to high priority projects throughout the nation. New York's educational, historical, and cultural institutions, students, and researchers have benefited significantly from the Commission's programs. For example, publication grants have enabled cultural and educational institutions to publish papers of prominent New Yorkers and thus increase their research use.

NHPRC records program grants have funded important projects to address statewide historical records priorities and individual repository projects for agencies ranging from The Juilliard School and the City of New York to the Centers for Puerto Rican Studies and Migration Studies. A grant by the Commission to the State Archives and Records Administration to supplement the State's Documentary Heritage Program (DHP) has supported subgrants to a number of repositories for arrangement and description of key collections and other important activities. The grant also has helped encourage additional State support for the DHP. In addition, during the past two years, the NHPRC has begun to provide much needed leadership and support to address electronic records issues, the most pressing national archives and records problem. However, the Commission's staffing resources have not been adequate for the analysis and follow-up needed on this complex matter.

At its current appropriation level, the NHPRC is able to fund only a small number of worthy historical records proposals and cannot support the major actions needed to address the nationwide electronic records challenge.

Corporation for Public Broadcasting (CPB). The Federal government must reaffirm its strong support for com-

munity public television and radio by supporting and sustaining substantial funding for the CPB and the National Telecommunications and Information Agency - Public Telecommunications Facilities Program (PTFP). It also must continue the forward-funding policy that ensures that the CPB and the public broadcasting community have a reasonable planning period and insulation from undue political interference. Support is needed to maintain services to rural areas, encourage collaborative program purchases, help develop special adult learning programs, and assist postsecondary learning.

The first round of Star Schools projects illustrates the benefit of using technology in education. A combination of technologies is being used to bring educationally disadvantaged students in primarily rural areas into the same electronic classroom. Continued support is essential for this program.

Communications Technology. Innovative public broadcasting technology offers an increasing number of consumers the opportunity to participate in the rapid evolution of ideas, facts, and resources that characterize the computer age. This capability is especially important to people living in sparsely populated areas where pubic broadcasting is frequently the main link to broader educational and cultural activities. The public and commercial broadcasting communities are interested in the possibilities inherent in state-of-the-art advances such as high definition television and fiber optic networks. Such services, along with new regulations on the use of the vertical blanking interval of the television signal and Subsidiary Communications Authorization (SCA) of FM stations, have opened up broad opportunities for such communities to seek the achievement of planned goals.

In 1990, the FCC recommended adoption of a must-carry agreement consistent with the recent agreement between the National Association for Public Television Stations and the National Cable Television Association in which cable companies will carry noncommercial television stations. This agreement is necessary to ensure continuing access of public television to the nation.

Program Production. The entire public television industry has warned of an imminent program production crisis. Unless Federal and state production funds are made available, the stream of quality television and radio programming, which a society of our wealth and sophistication needs, will evaporate.

Funding cutbacks for agencies such as the CPB and the PTFP have severely curtailed production of low-cost programs available to public stations. The system needs more support from multiple sources: e.g., CPB, NEH, NEA, and the Department of Education.

Institute of Museum Services (IMS). The IMS established the precedent for Federal support of general museum operations based on competitive grants. IMS funding, with its ceiling of $75,000 per institution, may be only a small portion of the operating funds of any institution. However, it often provides a critical margin of difference in attracting private support and carrying out needed conservation and collections management programs.

The IMS can assist fewer than one-fourth of the nation's museums each year at its current funding level. Significantly enhanced support is needed, particularly for general operating aid and for conservation and preservation programs that will assure the survival of our cultural heritage.

United States Department of Education. *Library Services and Construction Act (LSCA).* LSCA has been the principal base of Federal support for libraries for 35 years. The 1990 LSCA reauthorization provides a basis for these important programs that can extend literacy, increase productivity, and sustain a more democratic society. LSCA helps libraries keep pace with the explosive growth in information technology; extend service to rural areas and Indian reservations; strengthen urban resource libraries; create job and education information centers; start and maintain statewide resource sharing networks; and, implement and expand literacy services and services to people who are disabled, limited English proficient, disadvantaged, institutionalized, or elderly.

LSCA also supports state information and technology programs, including grants to public libraries for technology equipment, technical assistance, interlibrary cooperation in using technology, and dissemination of adequate public information about services. As international economic competition increases, libraries are expected to provide information on complex trade and marketing questions and materials and information needed to understand other cultures, languages, and business practices.

Elementary and Secondary School Library Resources. A school's library media program supports a successful academic program by providing resources covering a range of interests and reading levels. For many students, especially the disadvantaged, the media center provides the only access to certain learning materials.

But, the old categorical aid programs for media were included in the Education Consolidation and Improvement Act Chapter 2 block grant, which was funded well below the total of all the programs folded into it. Given the limited discretionary education funds and the many areas of need, the amount of Chapter 2 money devoted to media has been minimal in many localities. Some schools, particularly in disadvantaged communities, have been hard pressed to allocate limited Chapter 2 funds for library resources.

With the loss of funding, increased need for materials to support educational improvements, reduced school

library budgets, and escalating cost of library resources, they have been unable to cover the loss with local funds. Most public schools have joined regional school library systems so schools can share resources and better meet the needs of students and teachers. But, resource sharing works best among reciprocal partners. Before they can share resources, schools must maintain and build their own collections to have something of value to share. Then, Federal, state, and local sources must provide adequate funds for full collection development and improvement.

Vocational and Applied Technology Education Act. To assist educational use of video and television technology, the Congress should increase National Program funding under this Act to develop and produce video-based vocational and technical education learning materials that could be used nationwide. We also support the provision of matching vocational education funding to states for acquisition of video-based learning resources for use in local vocational and technical schools and colleges.

Higher Education Act (HEA). HEA Title II provides important funding for libraries, particularly to help develop academic collections, expand resource sharing, strengthen research libraries, automate facilities, and provide training. This topic is discussed more fully in the section on the HEA reauthorization.

Federal Policy on Information and Cultural Services

National Archives and Records Administration (NARA): In 1985, the NARA was statutorily reestablished as an independent agency. But it remains in a very weakened condition that prevents it from identifying, preserving, and making available the irreplaceable archival records of the national government. Between 1980 and 1990, for example, NARA lost the equivalent of 500 positions; despite substantial productivity gains, at least 300 of these must be restored. The cost will be more than $9 million.

A major 1989 external study, *Making the National Archives A Premier Research Institution*, defined how much needs to be done in the basic research services area because of a long period of insufficient resources. In addition, many records of permanent value cannot be administered effectively or housed adequately in the overburdened main building on Pennsylvania Avenue. An "Archives II" building is rising on the University of Maryland Campus, and resources must be provided to complete it. In both the old and new buildings, internal automation for description and retrieval, as well as the use of modern technologies for preservation, storage, and reproduction cannot be implemented adequately because of the lack of sufficient resources.

The largest challenge for NARA is the issue of electronic records: how to ensure that Federal records of archival value, increasingly created and administered in automated, electronic formats, are retained to ensure future accessibility. Electronic records often are highly complicated, fragile, and transitory; even the definition of a "record" in this new environment is unsettled.

Such conditions pose very difficult technical, methodological, resource, and policy questions. Their solutions require resources and aggressive and strategic NARA leadership, strong government-wide information policies sensitive to archival issues, and highest government support. The electronic records issue also has the highest priority for government archives programs nationwide, and it is reasonable that they look to the NARA for guidance. In fact, many of the largest and most complex information systems are intergovernmental and can be addressed effectively only through cooperation among levels of government.

In its present condition, NARA cannot serve as the model needed by state and local government. While it has been more helpful to state archives during the past several years, NARA must still give highest priority to its direct responsibilities for Federal records. It cannot yet provide sufficient leadership to fully address problems in intergovernmental records administration or to deal with technological and methodological issues vital to all levels of government. Fuller and more formal partnerships need to develop between NARA and states.

Paperwork Reduction Act/Federal Information Resources Management Act. Neither House nor Senate versions of the proposed Paperwork Reduction Act/Information Resources Management Act is sufficiently comprehensive to establish a framework and objectives for the management of the Federal government's information resources. Neither provides for the Federal-state partnership that is appropriate for the extent of information sharing between the states and the Federal government and for the impact of Federal information practices on state and local governments.

Postal Revenue Subsidy for Nonprofit Mailers. Third- and fourth-class library rates are used by libraries, schools, colleges and universities, museums, and other nonprofit organizations to mail educational materials. For example, libraries use the rate to share their resources through interlibrary loans and to send materials to the incapacitated, the elderly, the rurally isolated, and people without access to transportation. The Regents oppose any attempt to restrict such preferred postal rates.

Tax Incentives. The Regents are concerned about provisions of the Federal tax code that have an impact on information and cultural services, including charitable contributions, donations of creative works, and the Unrelated

Business Income Tax. These topics are discussed in this brochure's section on tax incentives. However, we also urge Congress to enact legislation to enable taxpayers to make donations to libraries as a check-off on their tax returns to supplement, not replace, funding for libraries.

Recommendations

1. Congress should direct Federal agencies to use the nationwide network of libraries and the document depository system to disseminate information on national problems, such as drug abuse, literacy, environmental concerns, youth at risk, and an aging population. A percentage of appropriations to agencies for addressing these issues should be allocated to public libraries to support related public education and information programs.

2. There should be concerted Federal support for information and cultural activities and to avoid any limitation on freedom of expression in ensuring access to a wide spectrum of resources.

3. The Federal Council on the Arts and Humanities should recommend steps to codify and strengthen international conventions on the theft, export, or import of stolen antiques and art objects.

4. The appropriation level of the National Archives and Records Administration (NARA) should be increased by at least $9 million annually to restore 300 of the 500 positions lost during the past decade and to permit a stronger program to identify, preserve, and make available archival records in electronic formats. Funds should be provided for the new "Archives II" building, for automation of NARA-wide archival work, and for research and development to improve archival methods.

5. NARA should be mandated and funded to carry out a study, in cooperation with the National Association of Government Archives and Records Administrators, to identify common Federal-state needs. The study also should recommend how to carry out a continuing, formal coordination program between NARA and state government archives and records program on matters of mutual interest.

6. Full authorization of $10 million should be provided for the grants programs of the National Historical Publications and Records Commission (NHPRC), with at least 70 percent assigned to records projects. Staffing of the NHPRC records program should be expanded to support increased leadership and liaison on state and local government information policy and electronic records issues. The Commission should give special attention to identification and preservation of electronic records with continuing historical or other research value by funding development of electronic records programs in state and major local governments and by promoting a national center for such records. The NHPRC should support grant projects to increase public awareness and understanding of the archival role in society.

7. In revising the proposed Paperwork Reduction Act/Information Resources Management Act, Congress should adopt the recommendations of the National Association of Government Archives and Records Administrators, including provisions for an information locator system; consultation with states on proposed Federal information systems and policies that will influence the states; and other moves to attune the new law to modern information management needs and to ensure Federal-state coordination and cooperation. These recommendations align with suggestions endorsed by the Council of State Governments, the National Governor's Association, and the National Conference of State Legislatures.

8. Congress should support forward-funding reauthorization legislation for the Corporation for Public Broadcasting (CPB) at increased levels through 1993; raise allocations for the Public Telecommunications Facilities Program (PTFP) in the Department of Commerce; and authorize $200 million for satellite replacement.

9. A separate Federal allocation of funds is needed to ensure a flow of quality public television programming.

10. CPB appropriations should include sufficient set-aside funds to produce, broadcast, and publicize a significant body of public television and radio programming aimed at early childhood development and parent education. We also need a national office to handle this important mission as the CPB/Annenberg project has with the use of television to meet postsecondary learning needs.

11. CPB or U.S. Department of Education appropriations should include set-aside funds to help low-performing schools acquire classroom video equipment. These schools typically lag behind their better-performing counterparts in having the video equipment needed to assure equitable access to learning.

12. Higher demand and costs for museum services should be met with increased funding for the Institute of Museum Services.

13. Legislation is needed to provide incentives for museum-school and library-school partnerships. Museums should be defined as education institutions, making them eligible for Federal funds when they deliver educational services to students and teachers. This should include support for: the use of museum and library facilities and resources for such purposes; teacher education and in-service programs with materials and training in topics such as teaching with primary source material, teaching basic skills, and developing hands-on science and history units; alternative learning sites and after-school and weekend programs in museums, coordinated with programs in the schools, that prepare children to learn independently and to access information effectively; and materials and programs for early childhood and par-

ent education that bring children, parents, and other family members together to learn.

14. We support S. 58 and H.R. 585, to create national policy for conservation of biological diversity and a National Center for Biological Diversity and Conservation Research at the Smithsonian Institution. The legislation should provide competitive grants to nonregulatory state agencies with a clear research mission and to other qualified groups to spur related research.

15. We support S. 1179 (Geologic Mapping Act of 1991) and H.R. 2763 (National Geologic Mapping Act of 1991) to encourage and accelerate production of detailed geologic maps. These bills authorize a national geologic mapping program with the U.S. Geological Survey as lead agency in association with the states.

16. Appropriations for the Library Services and Construction Act (LSCA) should be increased to authorized levels.

17. LSCA Title II support for public library construction should be continued to provide the physical facilities needed for modern library services and enable public libraries to meet requirements of the Americans with Disabilities Act.

18. Congress should authorize an Assistant Secretary of Education for Library and Information Services to manage Federal library programs and policies and coordinate them with activities of the National Commission on Libraries and Information Science, the Library of Congress and other national libraries, and the NARA.

19. The LSCA should be amended to target family literacy programs and recognize the unique role of libraries in fighting illiteracy.

20. LSCA Titles VI (Library Literacy) and VIII (Library Learning Center Programs) should be made state-based, rather than discretionary, so that all state LSCA literacy and family learning programs can be coordinated effectively with state and local literacy efforts, regardless of sponsorship.

21. Congress should mandate coordination of NREN and HEA programs with LSCA Title III activities in each state.

22. Federal legislation is needed to ensure affordable telecommunications rates that facilitate resource and information sharing among libraries, educational institutions, and nonprofit agencies. Access charge decisions of the Federal Communications Commission and divestiture-related tariffs have a major adverse impact on library telephone and data communications costs, threatening automation and bibliographic resource sharing programs.

23. Legislation is needed to provide incentives for support of learning materials resources in school libraries, to help purchase materials and ensure the supply of certified school library media specialists.

24. LSCA should be amended to include a new title for school library development and network participation.

25. Full Federal support is needed for the National Endowments for the Humanities and the Arts and the National Science Foundation, especially to formulate a coordinated strategy to save deteriorating research materials; counteract shortages of scientists, librarians, and teachers of humanities, science, and mathematics; promote the importance of an unfettered social role for the arts; and sponsor research into fields under these agencies' purview.

26. We urge full funding for elementary, secondary, and vocational education programs that develop and produce video-based education learning materials. Money also is needed for descriptive video or captioning and a special CPB educational allocation.

27. Congress should extend the Treasury-Postal Service appropriations subsidy to ensure that cultural and educational institutions can communicate and raise funds at reasonable cost.

28. We urge Congress to enact legislation to enable taxpayers to make donations to libraries as a check-off on their tax returns to supplement, not replace, funding for libraries.

APPENDIX

CHRONOLOGY OF SIGNIFICANT DATES IN THE HISTORY OF FEDERAL INVOLVEMENT IN EDUCATION

1777 Initiation of direct Federal administration of educational programs, starting with instruction of military personnel, including schooling in mathematics; adoption of a plan to establish a military academy.

1785 Land Ordinance, commencing education aid to territories, and later to states, by endowment of public lands to schools.

1787 Northwest Ordinance ("the charter of public education"), commencing endowment of public lands to public higher education institutions.

1802 Ohio Enabling Act, giving a section of each township "to the inhabitants...for the schools thereof," and five percent of the proceeds of public land sales for public improvement, including schools; establishment of the United States Military Academy, the first Federal higher education institution.

1818-1850 Expansion of the "land grant" concept, based on the 1802 Ohio act, through similar plans in Illinois, Michigan, Oregon, and California as they entered the Union.

1862 First Morrill Act, starting Federal aid to states through land grants for colleges for agricultural and industrial education and military tactics instruction.

1867 Establishment of Federal Department of Education.

1876 Establishment of the principle that schools should be free from sectarian control.

1890 Second Morrill Act, introducing a policy of Federal grants for college instruction in specified subjects; beginning of administration of Federal aid programs by the United States Office of Education.

1911 Marine School Act, starting Federal aid with state matching requirements.

1914 Smith-Lever Act, starting cooperative extension work in agriculture and home economics (first direct aid for adult education).

1916 National Defense Act, authorizing establishment of Army Reserve Officer Training Corps (ROTC) programs at colleges and universities.

1917 Smith-Hughes Act, commencing Federal aid for vocational education below college level.

1918 Smith-Sears Act, providing vocational rehabilitation aid for World War I veterans.

1920 Smith-Bankhead Act, commencing Federal-state cooperation in vocational rehabilitation for persons disabled in industry.

1937 National Cancer Institute Act, establishing the Public Health Service fellowship program and setting the precedent for legislatively authorized fellowships.

1940 Appropriation of Federal funds for summer training programs for workers essential to defense.

1941 Lanham Act, providing assistance to public schools in areas affected by Federal war activities.

1943 Establishment of Army specialized training programs at colleges and universities.

1944 Servicemen's Readjustment Act (G.I.Bill of Rights), providing assistance for veterans' education.

1950 Public Laws 815 and 874, providing Federal sup-

port for schools in certain federally affected localities.

1953 Creation of the Department of Health, Education, and Welfare.

1954 Cooperative Research Act, providing for educational research and research training under the United StatesOffice of Education.

1956 Library Services Act.

1958 National Defense Education Act, providing assistance to state and local school systems for strengthening instruction in science, mathematics, modern foreign languages, and other critical subjects; improving state statistical services; guidance counseling, testing services, and training institutes; higher education student loans and fellowships; foreign languages institutes and advanced foreign language study and training provided by colleges and universities; experimentation and dissemination of information on more effective use of media; and vocational education for technical occupations necessary to the national defense.

1962 Manpower Development and Training Act, providing training for the unemployed and underemployed.

1963 Higher Education Facilities Act, authorizing grants and loans for classrooms, libraries, and laboratories in public community colleges, technical institutes, and undergraduate and graduate facilities in other higher education institutions.

1963 Vocational Education Act, requiring action plans to overcome sex discrimination, sex bias, and stereotyping in vocational education.

1964 ROTC Vitalization Act, formally establishing ROTC scholarship programs and high school Junior ROTC programs.

1964 Civil Rights Act, prohibiting discrimination against students on the basis of race, color, or national origin by any organization receiving Federal assistance.

1965 Elementary and Secondary Education Act, providing funds for local school districts to broaden and strengthen elementary and secondary school programs (principally to aid children from lower-income families).

1965 Higher Education Act, providing grants for university community service programs, college library assistance, library training and research, strengthening developing institutions, teacher training programs, and undergraduate instructional equipment; authorizing insured student loans; establishing a National Teacher Corps; and providing graduate teacher training fellowships.

1965 Adult Education Act, authorizing grants to states to encourage and expand adult education programs, including training of teachers of adults and demonstrations in adult education.

1968 Bilingual Education Program, providing services to meet the special educational needs of limited English speaking students.

1972 Basic Educational Opportunity Grant program, as part of the Education Amendments, assisting in making postsecondary education accessible to all qualified students.

1972 Title IX of the Education Amendments, prohibiting sex discrimination against students or any employee of a school district receiving Federal financial assistance.

1972 Indian Education Act, providing financial assistance to meet the special educational and culturally related academic needs of Native American students.

1973 Comprehensive Employment and Training Act, providing employment and training opportunities for unemployed and underemployed persons (expansion and consolidation of the Manpower Development and Training Act of 1962, Title I of the Economic Opportunity Act of 1964, and the Emergency Employment Act of 1971).

1973 Rehabilitation Act, facilitating expanded opportunities for all handicapped individuals.

1975 Education of the Handicapped Act, providing for a "free appropriate education" for handicapped children.

1976 Veterans Educational Assistance, providing for expanded programs.

1977 Youth Employment and Demonstration Projects Act, establishing a youth employment training program that includes promoting education-to-work

transition, literacy training, bilingual training, attainment of certificates of high school equivalency, job sampling, and institutional and on-the-job training in basic and job skills.

1978 Middle Income Student Assistance Act, modifying provisions for student financial assistance programs to allow middle income postsecondary students to qualify for Federal assistance.

1979 Department of Education Organization Act, establishing an independent United StatesDepartment of Education.

1981 Omnibus Reconciliation Act, reducing funding levels for education programs and creating the Education Consolidation and Improvement Act which consolidated nearly 30 elementary and secondary education programs into a single block.

1982 Job Training Partnership Act, providing education for employment opportunities to unskilled youth and adults.

1984 Education for Economic Security Act, establishing programs to improve the quality of mathematics, science, and foreign language teaching and restoring some funding for Emergency School Aid Act activities.

1986 Drug-Free Schools and Communities Act, establishing programs for drug and alcohol abuse education and prevention.

1986 Education of the Handicapped Amendments, extending services to preschool handicapped children with mandatory programs for three- to five-year-olds.

1988 Hawkins-Stafford Elementary and Secondary School Improvement Amendments, reauthorizing and restructuring integral programs such as the Chapter 1 program for education of disadvantaged and at-risk youth.

1988 Omnibus Trade and Competitiveness Act, providing several new education programs targeted to improving our nation's competitiveness in the world economy, including measures to enhance the transfer of education and training technology between sectors of the economy.

1988 Family Support Act, overhauling the national welfare system and creating a Job Opportunities and Basic Skills Training Program to provide employment, education, and training to recipients of Aid to Families with Dependent Children.

1990 National and Community Service Act, establishing a series of Federal activities to promote public service, including a school-based component.

1990 Carl D. Perkins Vocational and Applied Technology Education Act, targeting funds to at-risk people and providing a continuum of service to students, including a Tech-Prep Education component that melds the last two years of high school study with the first two years of community college or an apprenticeship program.

1990 Child care legislation, authorizing a national program of tax credits and grants to help people in need obtain child care services.

1991 High-Performance Computing Act, supporting creation of the National Research and Education Network (NREN), an electronic "highway" to link research and education institutions, government, and industry in every state.